Qatar National Development Strategy

2011~2016

استراتيجية التنمية الوطنية

National Development Strategy

Qatar National Development Strategy

2011~2016

Towards Qatar National Vision 2030

الأمانة العامة للتخطيط التنموي
General Secretariat for Development Planning

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Foreword

Under the guidance of His Highness Sheikh Hamad Bin Khalifa Al-Thani, our beloved Emir, the pioneer of our advancement and the leader of our march forward, the first National Development Strategy for the State of Qatar 2011–2016 was prepared to set a path towards achieving the goals of *Qatar National Vision 2030*.

The National Strategy deepens our commitment to increasing the well-being of all Qatari citizens and lays out a carefully designed programme for how to continue providing the best education and healthcare as well as social protection and employment opportunities in a prosperous, stable and secure society that nurtures its members and preserves and protects family cohesion.

A product of consultations with all segments of Qatari society, including the private sector and civil society, the Strategy takes into account Qatar's cultural and religious values, as well as the needs of future generations, covering all aspects of social, economic and environmental activity.

Qatar's tremendous progress is clear in all fields. However, the stresses that accompany rapid progress are also visible. Our mission—balanced and sustainable growth—requires responsible use of resources and continuous modernization and development of public institutions to ensure good programme management and high-quality public services.

This Strategy also highlights our competitive position in the international economy and reminds us of the effective role we must play at both the regional and international levels.

I would like to thank all those who contributed—in particular, the National Steering Committee, the Executive Groups, Task Teams and technical support groups. I would also like to commend the General Secretariat for Development Planning and its Secretary General for their role in coordinating the preparation of the Strategy.

Everyone in Qatar, including the private sector and civil society, must fully commit to implementing the Strategy's framework and achieving its development objectives. Doing so will bring prosperity and benefits for us today as well as for Qatar's future generations.

May Allah guide our steps.

Tamim Bin Hamad Al-Thani
Heir Apparent
Head, Supreme Oversight Committee for implementing *Qatar National Vision 2030*

March 2011

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HE Abdullah bin Hamad Al Attiyah	Deputy Prime Minister and Chairman of the Emiri Diwan	Member
HE Dr. Ibrahim Ibrahim	Secretary General, General Secretariat for Development Planning	Member
HE Sheikh Hamad bin Jabor bin Jassim Al Thani	Director General, General Secretariat for Development Planning	Rapporteur

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HE Sheikh Jassim bin Abdul Aziz Al Thani	Ministry of Business and Trade	Minister of Business and Trade
HE Sheikh Abdullah bin Saud Al Thani	Qatar Central Bank	Governor, Qatar Central Bank
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* Her Excellency Sheikha Hessa bint Hamad bin Khalifa Al Thani became a member of the NSC in December 2009.

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General Secretariat for Development Planning management support

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The National Development Strategy 2011–2016 has been distilled from 14 sector strategies and background reports prepared by the Task Teams under the guidance of the Executive Groups and the supervision of the National Steering Committee.

The data for the figures and tables in the National Development Strategy have been derived from the sector strategies listed here and from their related background reports.

National Development Strategy 2011–2016 Sector Reports

Name	Agency
Culture Sector Strategy 2011–2016	Ministry of Culture, Arts and Heritage and General Secretariat for Development Planning (GSDP)
Economic Diversification and Private Sector Development	Ministry of Business and Trade and GSDP
Economic Infrastructure	Ministry of Municipality and Urban Planning and GSDP
Economic Management	Ministry of Economy and Finance and GSDP
Education and Training Sector Strategy 2011–2016	Supreme Education Council and GSDP
Environmental Sector Strategy 2011–2016	Ministry of Environment and GSDP
Family Cohesion and Women's Empowerment Sector Strategy 2011–2016	Supreme Council for Family Affairs and GSDP
National Health Strategy 2011–2016	Supreme Council of Health and GSDP
Institutional Development and Modernisation Report	General Secretariat for Council of Ministers and GSDP
Labour Market Sector Strategy 2011–2016	Ministry of Labour and GSDP
Natural Resource Management	Qatar Petroleum and GSDP
Public Safety and Security Sector Strategy 2011–2016	Ministry of Interior and GSDP
Social Protection Sector Strategy 2011–2016	Ministry of Social Affairs and GSDP
Sports Sector Strategy 2011–2016	Qatar Olympic Committee and GSDP

Executive summary

Executive summary

Qatar National Vision 2030 (QNV 2030), launched in October 2008, builds a bridge from the present to the future. It aims to transform Qatar into an advanced country, sustaining its development and providing a high standard of living for all its people—for generations to come. It foresees a vibrant and prosperous Qatar with economic and social justice for all. It envisages all Qataris working together in pursuing these aspirations, with strong Islamic and family values guiding their collective energies.

QNV 2030 builds on a society that promotes justice, benevolence and equality. It embodies the principles of the Permanent Constitution, which protects public and personal freedoms, promotes moral and religious values and traditions, and guarantees security, stability and equal opportunities. In line with these principles, *Qatar National Vision 2030 (QNV 2030)* rests on four pillars:

Human development—to enable all of Qatar's people to sustain a prosperous society.

Social development—to maintain a just and caring society based on high moral standards and capable of playing a prominent role in the global partnership for development.

Economic development—to achieve a competitive and diversified economy capable of meeting the needs of, and securing a high standard of living for, all its people for the present and for the future.

Environmental development—to ensure harmony among economic growth, social development and environmental protection.

QNV 2030 thus defines broad future trends and reflects the aspirations, objectives and culture of the Qatari people. Illuminating the choices available, it inspires Qatari people to develop a set of common goals related to their future, and it provides the framework for Qatar's National Development Strategy 2011–2016.

Qatar's management of its hydrocarbon resources will continue to secure improvements in standards of living, but those improvements cannot be the only goal of society. The National Development Strategy 2011–2016 thus aims to balance five major challenges identified in *QNV 2030:*

First, moulding modernization around the preservation of Qatari culture and traditions.

Second, balancing the needs of this generation and those of future generations.

Third, managing growth and avoiding uncontrolled expansion.

Fourth, matching the size and quality of the expatriate labour force to the selected path of development.

Fifth, aligning economic growth with social development and environmental management.

Formulating the National Development Strategy 2011–2016

This National Development Strategy 2011–2016, Qatar's first, is the culmination of extensive stakeholder consultations, dialogues and analyses. The positive and unprecedented engagement of multiple sectoral and intersectoral stakeholders reflects a genuine desire for reform that is in the best interest of the country. The consultation process began with ministers and key leaders from government, private sector and civil society and moved out into society. Reflecting the broad reach of the Strategy, cross-sectoral task teams comprised representatives from government ministries, agencies, private companies and civil society organizations. The extensive intersectoral consultations, including interviews, discussions, debates and research, were important for building a strategy that would enjoy strong and positive public ownership from the outset.

The Strategy builds on situational analyses, diagnostics, regional and international benchmarking and detailed strategies for each of 14 sectors. The situational analyses identified priority areas using baseline analyses of Qatar's situation and benchmarking against best practices in other countries, both in the region and around the world. The 14 sector strategy reports identify the priority areas and the many transformation initiatives to support each proposed programme and project, including core requirements, responsibilities, timelines and key indicators.

Aligned to the *QNV 2030* goals, the programmes and projects identified in the National Development Strategy 2011–2016, including outcomes and targets, are from the 14 sector strategies. Developed through an extensive consultative process and taking into account the many cross-sectoral links, the strategies provide profound and transparent analysis, benchmarking, diagnostics and priorities for each of the programmes and projects at a much more detailed level than is possible in this Strategy.

The targets in the Strategy, a subset of those in the sector strategies and developed with stakeholder inputs, focus on the results to be achieved by 2016. Both quantitative and qualitative, they will be reviewed and refined, as necessary, by key stakeholders at the beginning of programme and project implementation.

The sector strategies provide indicative resource requirements for each programme and project—identifying the key stakeholders in the projects and the risks and mitigation measures for successful implementation. Especially important, each strategy contains a basic monitoring and evaluation framework, supported by selected monitorable indicators, to enable adjustments during implementation.

Qatar's National Development Strategy 2011–2016 is a plan of action. It presents new initiatives while building on what already exists. For projects, policies and institutions already under way, it provides added impetus and focus.

Achievements and the outlook for 2011–2016

Qatar has built a solid foundation for embarking on the National Development Strategy 2011–2016. Rapid growth in the 2000s, the fastest in the world, has given Qatar one of the world's highest levels of per capita income (measured in purchasing power parity terms). High saving, both private and public, has been reflected in substantial domestic investment and the accumulation of a substantial pool of foreign currency assets.

To meet new demands in a more complex economy and to strengthen performance, Qatar has embarked on a variety of reforms. The reforms aim to bring together decisions of national significance within an integrated framework for making deliberate and concerted choices about Qatar's future. At an operational level the reforms emphasize improvement in public services and delivery of "value for money", thereby enhancing opportunities and conditions for the country as a whole as well as for individual citizens. By clarifying national development priorities and direction, the reforms provide greater predictability for the

private sector and civil society, leading to better alignment of interests across the country.

A significant rationalization of the functions and roles of ministries and agencies is under way, aimed at promoting tighter policy cohesion, improving service delivery, eliminating waste and enhancing public sector accountability and performance. Implementing these changes across the whole of government is now proceeding, with the General Secretariat of the Council of Ministers having been given the mandate for planning and performance monitoring across government. An initiative of particular importance is the expansion of the role of the former Ministry of Finance to include economic policy support, advice and coordination. In recognition of this expanded mandate, the Ministry was renamed the Ministry of Economy and Finance in 2008.

To look ahead towards the longer run development needs of the state, the General Secretariat for Development Planning was created in 2006 and given responsibility for managing longer term development planning. It was mandated by Emiri Decisions 39 and 50 to coordinate the formulation of *QNV 2030* and to support implementing ministries and agencies in executing it. *QNV 2030* was completed in 2008, and now, this document, Qatar's first National Development Strategy 2011–2016, has been formulated and approved by the country's high authorities.

The trajectory of Qatar's economy is tightly linked to developments in the hydrocarbon sector. Hydrocarbons still dominate the economic landscape, but Qatar is branching out into new areas.

A supply of cheap hydrocarbon feedstock and energy has helped prime the development of downstream industries in the petrochemical and metallurgy sectors, with some subsectors, such as fertilizers, growing at a fast clip. A foothold has also been established in new areas, including air transportation and media services. The Qatar Science and Technology Park now tenants more than 30 ventures in such areas as life sciences, oil and chemicals, environment, electronics and software engineering. Qatar's financial sector has also seen rapid development serving the needs of a larger and more complex economy.

Physical investments have fast caught up with needs. Bottlenecks in infrastructure, which contributed to high project costs and inefficiencies, are being tackled across a broad front. Investments in healthcare have been significant, supporting workforce productivity and fostering social cohesion. Thanks to the heavy investments in high-quality health services and delivery systems, mortality levels have declined markedly, and the prospects of survival at vulnerable ages have improved. A diverse complex of health facilities now meets widely divergent and often highly specialized needs, supported by more than 13,000 personnel, almost all with specialist medical and technical skills.

Education and training investments have also been significant. Recognizing deficits in its education system and in broader capabilities within the country, Qatar has invested heavily. Government education spending has steadily increased to about 5% of GDP in 2008, making Qatar second only to Saudi Arabia among Gulf Cooperation Council countries on this metric. Tertiary initiatives include expanding the Qatar Foundation Campus, reforming Qatar University, creating a new community college and introducing vocational and technical education streams.

Although these new directions are expected to be beneficial and support *QNV 2030,* they have suffered from a lack of integration and alignment. In addition, some measures have taken place only on paper or suffer from lags in implementation. While Qatar's National Development Strategy 2011–2016 will leverage existing initiatives, it must also provide a framework that can fill gaps and provide effective integration and alignment across sectors.

Economic outlook broadly favourable

Qatar's economic outlook for 2011–2016 is broadly favourable, with the global recovery continuing, thanks to robust growth in emerging markets and rebounding world trade. The growth of

hydrocarbon income will tail off in 2012–2013 as Qatar's highly successful 20-year investment programme in hydrocarbons culminates. Further significant investment in hydrocarbons must await expiration of the moratorium on production in the North Field, which is not expected before the end of 2015. Declines in crude oil production can also be expected as 2016 approaches, though efforts are under way to stem them.

While growth in 2012–2016 will be at a lower pitch than in the earlier years, income levels will remain high, and robust expansion of the nonhydrocarbon economy will help support aggregate GDP growth. Transport and communications, along with business and financial services, could grow vigorously. Construction will grow steadily, and manufacturing performance should improve. With the nonhydrocarbon sector expected to pick up the reins, aggregate GDP growth in 2012–2016 is expected to average just over 5%, but with virtually no contribution coming from hydrocarbons. The real domestic income generated by this growth will still depend on the trajectory of hydrocarbon prices, which have a decisive influence on Qatar's terms of trade. The baseline assumes some modest gains over average prices in 2010.

Qatar's investment pattern will reflect the decline in hydrocarbon capital spending. During 2011–2016, total gross domestic investment might be about QR 820 billion. Of this amount, perhaps half will come from the nonhydrocarbon sector. Central government ("public") investment is estimated at QR 347 billion. Based on current plans, public infrastructure spending will peak in 2012. This trajectory reflects existing plans for the launch of mega projects.

The government's fiscal position is expected to remain strong and will certainly be adequate to support future capital investments and the initiatives under the National Development Strategy 2011–2016. Gross national savings are likely to remain above 40% of GDP through 2014, but might edge down in the later years. The overall fiscal balance would narrow from current highs to around 6% of GDP by 2016, still very healthy. Double-digit surpluses could be maintained if revenue sources expand. The current account balance will remain firmly in surplus.

Modest increases in population will accompany the expected economic expansion. The total population of Qatar is expected to grow steadily at an average of about 2.1% a year during 2011–2016, with the total population rising from 1.64 million at the end of 2010 to just less than 1.9 million in 2016. The rapid population growth of the recent past is not expected to continue. This assumption aligns with the conjectures on output growth (above), but sees some advances in productivity, reducing employment per unit of output. The assumed structural shift to higher valued economic activity presupposes steady advances in the skill content of the labour force and further capital deepening.

Swing factors could change the outlook

Predicting the future is always a hazardous activity, and some swing factors could materially change the outlook. Of particular interest to Qatar is the outlook for hydrocarbon prices. For a hydrocarbon-based economy like Qatar, a future of low hydrocarbon prices (at least in the medium term) would have a considerable impact on the financial resources available, with implications for sustainable growth paths.

A view that crude oil prices will average about $74 per barrel during 2011–2016 alters the baseline outlook (which assumes an average of $86 per barrel). Applying the lower oil price assumptions suggests that the average nominal GDP level would shrink 2% relative to its baseline level by 2016. With expenditure more or less tracking GDP as in the baseline, the overall fiscal balance narrows. By 2016 the assumption of lower oil prices cuts the overall fiscal balance from just under 6% of GDP to about 4%.

Gas prices could be an even more significant swing factor. In spot markets, gas and oil prices have uncoupled. Although Qatar is shielded from

short-term fluctuations in spot gas prices through its long-term agreements with purchasers, prolonged weaknesses could put the price of Qatar's liquefied natural gas price basket under pressure. If gas prices are assumed to fall by 30% from their baseline (a modest decline compared with what has been experienced in spot markets) negative income and fiscal effects would follow. Because the share of liquefied natural gas in total output will rise over the period, the impact of falling prices on income is large. Cumulative losses over the period are QR 357 billion, a 9% reduction from the baseline level of cumulative GDP. The overall fiscal balance under these assumptions for lower gas prices, with expenditure held steady, could be reduced to 3.4% of GDP by 2016, more than 2 percentage points lower than the baseline.

In addition to coping with uncertainty, Qatar will face hard constraints on human and institutional resources that could affect implementation of the National Development Strategy 2011–2016. Qatar needs strengthened public sector institutions to achieve the goals of *QNV 2030*. That will require concerted institutional and organizational capacity building, efficient and transparent delivery of public services, fruitful public-private cooperation and partnerships as well as a vibrant climate for business and a larger space for civil society.

FIFA World Cup 2022 and higher government spending?

Hosting the FIFA World Cup 2022 presents Qatar with new opportunities. Over the early part of 2011–2016 the economic impacts of the World Cup are likely to be modest, but Qatar must prepare for the sizeable investments in infrastructure that will follow. These investments will be significant relative to the size of the economy, and their macroeconomic and longer term development impacts warrant close attention. Well beyond 2022, the World Cup may present opportunities to strengthen the structure and performance of Qatar's nonenergy sectors.

In the immediate future (2011–2012) the World Cup could affect trade and speculative investment. The impacts would likely be temporary, and the government will monitor them to prevent abuse of market power and protect the broader public interest.

From the perspective of Qatar's economic diversification ambitions, the World Cup presents new opportunities for the country. Public-private partnerships may benefit some projects and should be considered within wider public investment decisions. On the business front the World Cup will create opportunities for domestic enterprises to form strategic alliances externally and to connect to global value chains. The World Cup will also accentuate some challenges. Qatar should leverage the World Cup to close gaps in its capabilities. For example, investment agreements could include mechanisms that secure knowledge and technology transfer.

As mentioned, though some World Cup–related investment projects may be commissioned during 2011–2016, the added impact of World Cup activity during this period is likely to be modest. A sizeable pipeline of investments is already in place. In general, the macro-fiscal framework suggests that additional investment spending (whether public or private) is likely to have only a moderate short-run demand impact on local output and income.

After 2012, when the current expansionary phase of hydrocarbon development ends, calculations suggests that the structure of Qatar's economy will be such that 5 percentage points of additional public sector investment spending would be needed to generate a 0.5 percentage point temporary acceleration of growth in nonhydrocarbon output. The domestic income generated by added capital spending is diluted because a high proportion of the spending is likely to be on imports (capital goods and materials as well as consumption) and because a large share of wage income earned by expatriate workers is likely to be remitted rather than spent locally.

The fiscal impacts of higher public investment spending could be significant because it is unlikely to generate much of a tax offset. There is also a risk of inflationary pressures if the phasing of large-scale projects creates or aggravates supply bottlenecks.

During the period covered by the National Development Strategy 2011–2016, preparations for the World Cup will gather momentum. Institutional arrangements for overseeing and managing World Cup–related activities will be established, and the pipeline of investments to deliver needed infrastructure services will be prepared. From a planning perspective the World Cup is best considered within the broader framework of national development and not as a one-off event. Integrating planning and funding arrangements within broader frameworks for the overall fiscal and budgetary management of the economy will be important. A beneficial legacy will require scrutiny of large World Cup–related capital projects for their long-term socioeconomic and environmental impacts.

Sustaining economic prosperity

QNV 2030 articulates three interrelated goals for the economy. It looks to sustain a high standard of living, to expand innovation and entrepreneurial capabilities and to align economic outcomes with economic and financial stability.

It defines sustainability as meeting the needs of the current generation without compromising the ability of future generations to meet their needs. To embed sustainability in Qatar's economy, progress is needed in three parallel, mutually reinforcing directions. First, the country will enlarge the value of the productive base, which is necessary to sustain prosperity in a growing population and to expand potential for future generations. Second, the government will guard against economic instability and promote increased efficiency. Third, the government will work in partnership with the private sector to diversify the economy and encourage a culture of innovation and discovery.

Expanding the productive base

The need to grow the productive base places speed limits on what the country can consume while preserving wealth for future generations. As Qatar's hydrocarbon income tapers off (either through declines in production or reduced unit rents), alternative sustainable sources of income must be created to support public consumption and cover Qatar's import bill. This will require high rates of saving and a steady flow of dividends on investments for the foreseeable future. A conjunction of far-sighted depletion policies, sound fiscal management and wise investment will support sustainability.

Qatar's planned investments in physical and social infrastructure are an essential part of a broader strategy to ensure continuing expansion of its productive base, and to attract further investments from the private sector. Qatar's infrastructure needs will in general be well met through 2016. Major investments are in the pipeline, and attention is being given to areas where the country must catch up (as in roads, industrial land and information and communication technology). Qatar's investment in foreign currency assets is also an important part of its broader strategy to diversify its future income base.

Because Qatar's hydrocarbon assets are property of the state, the government has a responsibility to maximize the value it captures from their exploitation. It may do this through fiscal measures, contract arrangements or some combination of both. In principle, the state will strive to capture all rents embodied in the mineral assets it owns and to ensure an adequate return on any capital that it invests. If hydrocarbon rents are efficiently targeted, the volume of private investment should not be affected (investment neutrality) because private investors will still earn their required risk-adjusted rate of return. But while the principle of optimal rent capture and investment neutrality will continue to serve as a useful guideline, pragmatism will require the application of frameworks that reflect reality and can be implemented.

In the future, as in the past, the government will ensure that the structures governing hydrocarbon-linked investments, upstream and downstream, provide adequate flexibility to deal with project specifics and changing cost or market conditions. Equitable risk-sharing arrangements will also be

important. While the state will take all steps to eliminate sources of risk within its control, the elimination of operational or commercial risks through state guarantees or other means will be detrimental if it dilutes incentives for the private sector to perform. In cases where hydrocarbon rents are shared with private investors, the state will seek to ensure that these rents are compensated by other benefits that flow to the country (such as the acquisition of technology, infrastructure or knowledge and skills).

Qatar will leverage its cheap domestic feedstock and energy to contribute to the expansion of its productive base and long-run diversification. The relevant test is that associated investments provide an acceptable risk-adjusted return on the totality of the resources committed by the state. Several opportunities exist. Industries that gain advantage by eliminating transport and distribution costs and relocating closer to sources of energy and feedstock provide one avenue for investment. Another long-term opportunity would be to integrate along the energy supply chain. For example, Qatar might export surplus power generated from gas to the region and beyond. Potentially Qatar enjoys advantages in areas that would be viable even if the country had no domestic hydrocarbon production. Qatar has an established advantage in production and transportation and a potential advantage in vertical integration of connected activity in distribution and storage.

Qatar Petroleum Industries and other entities in the energy sector have performed well in spearheading investments, but as Qatar works to diversify its economy beyond carbon, a strengthened policy and coordination function may be useful. In some other countries high-level independent agencies have played central roles in advising government and in implementing investment and industry development policies.

Enhancing economic stability

Hydrocarbon dependency exposes Qatar to gyrations in global energy markets, leaving economic planning prey to high levels of uncertainty. For a hydrocarbon-exporting economy such as Qatar, energy price shifts hit the fiscal revenue stream directly, creating ripple effects throughout the economy. The inherent unpredictability of energy prices makes it particularly difficult for policy-makers to judge the most constructive fiscal stance. There is always the risk that errors in fiscal calculations accentuate volatility. Given the unpredictability of global oil prices, it is virtually impossible to know whether price changes are temporary or lasting. Recognizing the challenges, and the need for high levels of saving and a broader fiscal base, the government will launch a budget reform programme, built around a reorganization of the Ministry of Economy and Finance. The key goal is successfully implementing a comprehensive legal and budgetary framework for public finance, consistent with the Permanent Constitution.

A fiscal transformation programme with five core elements will support this goal:

- A new budgetary law embodying the principles of efficient public finance.
- A functional classification for all spending using the United Nations Classification of Functions of Government to support sector wide and programmatic budgeting.
- A macro-fiscal framework that helps decision-makers analyse the fiscal and macroeconomic implications of commitments they are considering.
- A public investment programme to ensure that capital projects deliver the highest social worth and are well coordinated.
- A monitoring and evaluation function.

Meeting these commitments over the next six years will require institutional adjustments and concerted capacity strengthening, as well as the recruitment of technical experts in the Ministry of Economy and Finance and in line ministries and agencies. Partly because of limited expertise in Qatar in macro-fiscal policy and strategic and operational planning, the five-step programme will be rolled out gradually, at a pace the Ministry of Economy and Finance and other arms of government can manage.

A coordinated public investment programme will strengthen the government capital budget by ensuring that project objectives are aligned with the National Development Strategy 2011–2016. It will preserve and expand national wealth through the prioritization and selection of capital projects that create lasting value. It will address trade-offs among potential investments, committing resources where the benefit is greatest.

There are five basic requirements in establishing the public investment programme:

- Formalize the programme through relevant laws and instruments.
- Create public investment units within suitable agencies, with capable staff.
- Establish supporting processes and systems, including technically sound appraisal and evaluation techniques.
- Implement capacity-building initiatives to strengthen project preparation, implementation and evaluation skills.
- Pilot projects to test and refine key features of the public investment programme system.

On a case by case basis, private sector participation in public projects may prove beneficial. An increased private sector role can improve project and investment planning, management and operations. The government will ensure that public-private partnerships fit within the larger investment plan and provide a pathway for the transfer of skills to the country.

The requirements to establish an effective public investment programme process are similar to those to support budgetary reform. New systems and processes will be required in the central functions of government and in the line ministries and agencies making major capital spending decisions. New legal and regulatory infrastructure may be needed to support new roles, decision processes and institutional relationships.

Other avenues for enhancing stability will receive attention. The Ministry of Economy and Finance and Qatar Central Bank will work together to develop deeper and more liquid money and bond markets. The monetary and liquidity implications of fiscal and state-linked spending and investment decisions need to be better coordinated. The possibility of establishing a new financial mechanism to support fiscal stabilization objectives will also be considered but cannot substitute for sound fiscal policy.

Enhancing efficiency

Opportunities for efficiency gains proliferate, cutting across sector boundaries. By attacking inefficiency in technology, physical infrastructure, institutions and processes, the government can make a lasting contribution to improve the use of resources over time. With an abundance of hydrocarbon resources but a scarcity of other vital resources such as water and arable land, a drive for efficiency is central to creating and capturing value, preserving and expanding the productive base and encouraging the private sector to develop through discovery and economic diversification.

Improved efficiency has other benefits, too. By improving the use of capital assets, efficiency measures save fiscal resources by deferring or eliminating the need for replacement investments or capital expansion. Some efficiency gains reduce waste and unwanted by-products such as carbon dioxide emissions and waste water, contributing to environment goals.

Few tangible aspects of Qatar's life and economy are as in need of efficiency reforms as water—crucial to all human activity but in scarce supply. Large volumes of desalinated water (which is expensive to produce in terms of power) are lost in distribution. Precious aquifer water is largely wasted through open field irrigation methods for crops of low value. Large volumes of wastewater go uncollected, untreated and unused.

Qatar's National Development Strategy 2011–2016 identifies a range of initiatives to tackle technical and economic inefficiencies in the production, distribution and use of water. The implementation

challenges of water-saving initiatives vary. Stemming losses in the distribution system involves essentially technological fixes. Introducing water-saving devices to households is fairly straightforward, as Abu Dhabi and Canada have shown. Encouraging the use of water-saving appliances will require effective communication, but might also need supporting incentives. Water subsidies eclipse the scarcity and true value of the resource and contribute to overconsumption and waste. User charges that more accurately reflect full economic costs could make a significant contribution to redirecting Qatar's precious natural resources to higher value uses. Such efforts might be initially targeted at the non-Qatari population and industrial and commercial users.

Changing water consumption patterns in agriculture is vital to an integrated approach to water management, but it will require a fundamental and prolonged reorientation of farming, involving a range of factors including government subsidies. Recharging the aquifers with treated sewage effluent (if shown to be technically feasible) would ease the looming water scarcity. But without changes in irrigation methods and crop mixes, farming would continue to make heavy demands on Qatar's precious water resources. The government is committed to addressing this challenge and finding solutions within a wider programme of agricultural reform and the development of an agro-food industry.

A fully integrated approach to water management and a rethink of regulatory approaches are necessary to address these challenges. By 2014 Qatar will have established an independent regulator to help accelerate reforms of the water sector. As desalinated water is coproduced with power, these new regulatory arrangements will be integrated with those for power.

Although the country's power needs are fully served by a high-quality and reliable service, Qatar could achieve greater efficiencies through technical enhancements. Together, the changes could substantially cut domestic gas consumption. Although Qatar's abundant gas supplies are expected to last well into the future, improved efficiency creates both environmental and economic gains. By burning less natural gas, Qatar would support the national goal of lowering carbon dioxide emissions, thereby reducing the country's contribution to global climate change. Gas saved at home can be sold overseas, increasing national income.

Infrastructure projects that commit significant financial resources will be reviewed within the framework of Qatar's new Public Investment Planning process. From a national development perspective an integrated portfolio view of proposed capital projects will consider their engineering, financial, economic, social and environmental dimensions within the wider context of development needs and priorities. As noted earlier, Qatar's infrastructure needs through 2016 will generally be well served by high-quality infrastructure. But some projects in the national infrastructure pipeline appear to risk capital commitments that could be substantially in excess of what is required to meet needs (including allowances for uncertainty and adequate safety buffers) well into the future. A review to identify and eliminate these inefficiencies presents an opportunity for early wins for the National Development Strategy.

Ongoing initiatives to improve regulatory and procedural efficiency will be strengthened, including those in the areas of foreign investment, implementation of competition legislation and customs regulation. Efforts will also continue to enhance the quality of regulation in other areas, such as industrial land.

Building a diversified economy

Having achieved enormous gains by developing the hydrocarbon sector, the government is poised to take on another significant challenge—diversification. A more diversified economy is inherently more stable, more capable of creating jobs and opportunities for the next generation and less vulnerable to the boom and bust cycles of oil and natural gas prices. Qatar, like other countries seeking diversification, will build on areas of strength and potential.

Investing hydrocarbon income in foreign currency assets presents one important avenue for diversifying Qatar's income. But exclusive reliance on foreign currency asset income will not constitute a viable, long-term development strategy. It would create new types of risk, leaving Qatar prey to the vicissitudes of international capital markets. And it would not address Qatar's ambition to become an inquiring, innovative and creative society. The development of a more diversified domestic economic base, with knowledge activities in generating productive and remunerative jobs, is necessary to expand capabilities and support wider societal objectives.

Diversifying the domestic output base is not a stroke-of-the-pen shift. Entrepreneurship and innovation need to be learned, embedded in the education system and in the surrounding culture and supported through business friendly policies and regulations. Qatar's private sector will need strengthening, with support and incentives that encourage the acquisition of relevant capabilities and active participation in a wider range of economic activities.

Qatar is not alone in seeking a broader economic base. Other natural resource-based economies around the world are trying to do the same. Within the Gulf Cooperation Council, Bahrain and Saudi Arabia are working on strategies to encourage more diverse economies. Abu Dhabi also has a comprehensive plan.

The fact that other countries are pursuing diversification strategies creates opportunities for cross-country learning. But there are also risks. Many the Gulf Cooperation Council countries are focusing on diversification in the same areas, including petrochemicals, air transport, logistics, real estate, knowledge services, finance, life science and telecommunications. Depending on how these strategies evolve, the Gulf countries face the risk of channelling resources into the same sectors, with each country falling short of achieving an efficient scale of production.

To accelerate the diversification agenda, the government will address the constraints that impede economic discovery and the birth of new economic activities. The government fully recognizes that it must ensure macroeconomic stability, regulatory coherence and the effective delivery of infrastructure services (all examined above) to stimulate investment. In addition, the push to build a more diverse economy will require that special attention be directed to four areas that frustrate innovation and enterprise start-ups: low demand for skills amid surplus labour; a weak private sector and low levels of entrepreneurship; limited capabilities of discovery and innovation; and weak regional integration and connectivity.

A variety of institutions will contribute to Qatar's diversification drive. These include Enterprise Qatar, the Qatar Foundation, in which the Qatar Science and Technology Park is housed, the Supreme Council of Information and Communication Technology (ictQATAR), the Qatar Financial Centre and Qatar Development Bank. The strategies and programmes of these institutions and the National Development Strategy 2011–2016 must be mutually supporting.

Among other initiatives to stimulate diversification, a national plan will be prepared to accelerate the achievement of Qatar's research and development target of 2.8% of GDP. To promote the development of the knowledge economy and knowledge businesses, new forms of public-private partnerships will be trialled through a portfolio of pilot projects led by the Qatar Science and Technology Park. Efforts to support private sector development will be redoubled through new services provided by Enterprise Qatar and Qatar Development Bank, that will target small and medium-size businesses. ictQATAR will initiate projects that will ensure that Qatar is ready for the digital age. To address the constraints imposed by geography and scale, the government will leverage opportunities to strengthen regional integration and connectivity.

But ultimately, the success of Qatar's efforts to graduate from an economy based on non-renewable resource inputs to one in which productivity

growth and eventually innovation underpin prosperity will require fundamental policy shifts that alter the incentives facing its citizens. To expand opportunities for citizens and to build local capabilities, Qatar must start the process of transforming itself into a high-wage private sector economy.

Promoting human development

The human development pillar of *QNV 2030* calls for the "development of all its people to enable them to sustain a prosperous society" and "to meet the needs of this generation without compromising the needs of future generations". Qatar will continue to invest in its people so that all can participate fully in the country's social, economic and political life and function effectively within a competitive knowledge-based international order. It is putting in place advanced health and education systems that meet the highest global standards. It is also supporting the productive participation of Qatari men and women in the labour force, while attracting qualified expatriate workers in all fields, with a growing emphasis on the higher skilled.

This National Development Strategy 2011–2016 identifies the challenges in health, education and productive work. It also presents plans for meeting those challenges by nurturing a healthy, long-lived population, building world-class knowledge and skills and fostering a capable and motivated workforce.

Nurturing a healthy population

Qatar is committed to building a world-standard people-centred integrated healthcare system with policies and care designed to meet the needs of its population.

The national health sector strategy—which builds on the Supreme Council of Health's *Qatar National Health Vision 2020: Caring for the Future—Establishing a Healthy, Vibrant Society*—provides a practical guide for reforms, with far-reaching and fundamental changes envisioned across the healthcare system. It seeks to improve health outcomes by establishing a modern and comprehensive healthcare system with effective and affordable services for the whole population.

The system will span physical and mental preventive and curative healthcare, taking into account the specific needs of men, women and children. High-quality services will be offered through public and private institutions operating under the direction of a national health policy that sets and monitors standards for social, economic, administrative and technical aspects of healthcare. High-calibre research will be directed at improving the effectiveness and quality of healthcare.

To deliver integrated services, Qatar's national health sector will shift the balance towards a preventive, community-based model of care, focusing on the patient and ensuring access to the right care, at the right time, in the right setting, by the right team. The model will provide a full continuum of care anchored on capable and trusted primary care providers in a healthcare system offering the highest quality diagnostics and treatment.

The primary care provider will be the patient's first point of contact, overseeing referrals within the healthcare system, and considerable care will be delivered in the community. Coordination will be the norm in an integrated system, with healthcare providers working together to meet patient needs.

The national health strategy defines key outcomes and activities for achieving the ultimate goals for the sector:

- Build a comprehensive world-class healthcare system by shifting the balance of care towards a preventive and community-based model focusing on the patient and providing a full continuum of care anchored around a capable primary care system.
- Establish an integrated system of high-quality healthcare through effective use of information, communication and process improvements.
- Embed prevention and early detection into all facets of the system and empower people to be active participants in wellness, care and disease

prevention to shift the system from a focus on treating the acutely ill to addressing chronic diseases and their underlying risk factors.
- Recruit, retain and educate a high-quality workforce—a modern, learning and supported workforce—and overcome the constraints posed by a shortage of healthcare professionals in order to realize the goals of a world-class healthcare system.
- Establish a robust policy and regulatory framework to guide the health sector and ensure quality and accountability.
- Coordinate the planning and control of healthcare infrastructure and finance to ensure effective and affordable services based on the principle of partnership in cost sharing.
- Ensure coordination and a regulatory framework to support high-quality research for improving the effectiveness and quality of healthcare through continuous knowledge-led improvement, innovation and research.

This strategy's success will be determined by its implementation. It will also depend on collaboration with other sectors, with health as both a goal and an enabler. The most critical cross-sectoral link is in public health. Governments across the world have recognized that public health is the responsibility of all stakeholders, not just the healthcare sector. For Qatar this implies a preventive effort in which the Supreme Council of Health cooperates with stakeholders across government. These cross-sectoral links will be reflected as the Strategy moves into the next phase of validation and sector alignment.

Building knowledge and skills

As the Qatar economy diversifies from its reliance on gas and oil, success will depend increasingly on the ability to compete in a global knowledge economy. Continuing substantial investments in educating and training of Qataris will be critical to achieving the goals of the National Development Strategy 2011–2016. Beyond preparing citizens to be part of the country's economic engine, education and training offer multiple benefits to society. Education provides a solid grounding in Qatari religious, moral and ethical values, in national identity and in traditions and cultural heritage. Schools produce well-rounded and engaged citizens and build more cohesive and participatory societies. Education also helps people make better decisions about health, marriage, parenting and social responsibility. Finally, a successful education strategy supports innovation in science, medicine and industry.

Qatar has made great strides towards creating a world-class education system, through the Education for a New Era reforms, begun after the Supreme Education Council was established in 2002, and the reforms of Qatar University, begun in 2003. In addition, Qatar Foundation's Education City has continued to expand and progress over the past decade, with the establishment of a cluster of top-class international universities that are helping to make Qatar a regional leader in innovative education and research.

Qatar's education and training system will become more integrated, stretching from early childhood education through to higher education and additional training. Engrained in this system is the concept of lifelong learning, with individuals encouraged to acquire education and update their skills throughout their lives. This continuum spans three education sectors: general education (kindergarten through grade 12), higher education, and technical education and vocational training. While each sector has a distinct identity, mission and function, the three sectors need to operate within an overarching framework that embodies policy-related principles. And both education and training must establish stronger links with Qatar's labour market.

Further reform of Qatar's education and training system will address quality, equity and inclusiveness, and portability and mobility. These themes will guide policy decisions, along with variety and choice. Strengthened reforms will tackle a number of critical challenges and opportunities affecting both supply and demand for education and training. These include the underachievement in

math, science and English language at all levels, and the need to strengthen education administration and the teaching profession. The educational curriculum needs to be more aligned to the needs of the labour market while being supportive of Qatari values. The system needs to offer multiple pathways beyond secondary level to encourage a higher continuation rates.

Quality is critical in ensuring outcomes that address the needs of current and future labour markets. The challenge arises in achieving consistent and sustained quality across sectors. High-quality teachers, trainers and lecturers are a prerequisite, making it mandatory that all sectors monitor teacher training, qualifications and professional development. The current high turnover of Qatari and expatriate teaching staff must be reduced.

Attention to quality will be part of establishing curricula, resourcing schools and training centres, improving information and communication technology and managing governance arrangements. It will contribute to improving attainment by students at all levels, particularly in science, mathematics and languages. And it will support increased transitions to post-secondary studies. A major priority is to increase the share of students, especially males, who pursue a tertiary education, which has high returns.

Equity and inclusiveness also cut across the education and training sector. Related to lifelong learning, this principle should enable all people to acquire, develop and update their skills throughout their lives. Appropriate training and education should be available and accessible to all. Meeting the stated aim of "accessible educational programmes for lifelong learning", in a context of participation and inclusion, will require policies that overcome socio-economic barriers of gender, geography and age.

Important for inclusiveness is further expanding private schools. The popularity of private schools is rising among Qataris, who are increasingly paying from their own resources to send their children to international schools. Private schools saw increased enrolment after they became a responsibility of the Supreme Education Council and improved quality standards. The ultimate goal is to allow all Qatari students to participate, with school fees no longer a driving factor in school choice. Competition is expected to emerge not only between independent schools, but also between public and private schools, thus promoting variety and choice.

Portability and mobility, another key policy theme, also promotes variety and choice. Students and other stakeholders expect to have their qualifications recognized by education and training institutes and employers to receive credit for previous studies. In addition, students and stakeholders expect flexible career and study pathways for entering and re-entering the education and training system without penalty. This approach maximizes citizens' flexibility in planning careers, unconstrained by life stage or location.

To realize Qatar's vision of providing opportunities for citizens to achieve their full potential, Qataris must be able to move easily among education and training options and between those options and the workplace. No longer can education pathways be considered a linear progression through a vertical hierarchy of qualifications. Both vertical and horizontal pathways are needed, within and between sectors and institutions. A National Qualifications Framework will strengthen coordination and integration of the education and training systems.

Qatar has invested heavily in the best models of education pratice and will continue to strive for optimum adaptation and consistency between basic and higher education. This will ensure that a more diversified economy has access to workers with the required skills, while maintaining respect for Qatari cultural values and national heritage.

The strategy for the education and training sector identifies 20 key outcomes, with 29 related projects:

For addressing core education and training issues:

- Formulate a comprehensive, integrated 10-year strategic plan for all stakeholders, incorporating quality, efficiency and inclusiveness.

- Strengthen Qatari values throughout education and training.
- Support development of high-quality professionals and institutions.
- Integrate information and communication technology in education and administrative processes.
- Increase motivation and awareness of the benefits of education.
- Support evidence-based monitoring and policy-making by key stakeholders.

For improving general education:
- Ensure universal access to high-quality K–12 education.
- Consistently provide high-quality K–12 education.
- Support K–12 students to fulfil their potential.
- Provide appropriate education options for children with special needs.
- Increase awareness of skills required in future work environments.
- Improve parental, community and sectoral participation in K–12 education.
- Offer a broad range of basic education programmes for adults.

For improving higher education:
- Prepare Qataris for employment in the knowledge economy.
- Offer alternative pathways to tertiary education.

For improving technical education and vocational training:
- Develop an organizational model for technical education and vocational training and building capabilities.
- Develop a regulatory framework to align technical education and vocational training with education sector and labour market needs.
- Align technical education and vocational training programmes and outputs with the needs of society and the labour market.
- Increase the prominence of technical education and vocational training programmes.

For improving scientific research:
- Achieve a higher level of scientific innovation.

Fostering a capable and motivated workforce

Qatar's transformation into a diversified knowledge economy with increased private sector participation depends on upgrading and deepening the education, knowledge and skills of Qataris. Aligning these economic objectives requires a transition from the current low-skill, low-productivity and low-wage economy to a high-skill, high-productivity and high-wage economy.

Creating a more productive, skilled and motivated labour force requires major labour market reforms, especially in ways that encourage Qataris to participate in the private sector. Qatar's private sector constitutes a small share of the economy but has a big profile in employment— employing almost 80% of the workforce in 2009.

With heavy concentrations of Qataris in the public sector and expatriates in the private sector, especially in construction and services, the labour market is highly segmented.

Current employment sponsorship rules are affecting Qatar's labour market. They provide an incentive to recruit low-cost expatriate workers and a disincentive to Qatari employment and to automation. High levels of immigration support a low-wage, labour-intensive, low-productivity economy. The cost of importing low-skilled expatriate workers is heavily subsidized. Further, sponsorship constrains the mobility of expatriates and thus their ability to respond to labour market signals. A rigid labour market hampers the development of a workforce commensurate with aspirations for a knowledge economy. Although unemployment rates have been low in recent years, there are concerns about under-employment and falling labour productivity, especially in construction and services.

To realize the *QNV 2030* goal of a capable and engaged workforce, young Qataris need to be motivated to take advantage of the many opportunities for post-secondary education and training. Qatar will move from establishing numerical

targets for the employment of Qataris to emphasizing price and market-based mechanisms that link wages with productivity.

Entrepreneurial development of Qataris, especially of youth and women, will be encouraged to increase their involvement in the private sector. Barriers to entrepreneurship will be studied and initiatives launched, including incentives, business training and capacity-building at home and abroad in areas relevant to labour market needs. Increasing the participation of Qataris in the private sector and reducing their dependence on public sector employment will entail narrowing the gaps in social allowances and conditions of work.

A critical question is how much the wage gaps should narrow between Qataris and expatriates and between public sector and private sector workers. So, wage, salary and social allowance packages, including pension schemes, in the public sector (public administration, government companies and the mixed sectors) will be reviewed.

Training programmes will be demand-oriented and revised to meet priority needs with attention to content, quality and accreditation. Expanding the role of employment and intermediary services will reduce mismatches between labour supply and demand. Similarly, to cope with the needs of changing labour markets, the government will offer incentives to employers and employees for lifelong learning through retraining.

Policies on immigration, regulations, sponsorship and licensing will be reviewed and revised, as appropriate, to create more strategic demand for expatriate workers in line with the aim of recruiting and retaining the right mix of expatriate labour. Qatar's labour laws will be revised, as necessary, to protect further the rights and safety standards of all expatriate workers within a comprehensive social protection framework and in accord with international norms and standards. Career planning and professional programmes for targeted expatriates are critical in a knowledge economy, so that expatriates can effectively mentor and train young Qataris in all sectors.

The 2009 Law on Human Resources Administration will be reviewed and revised to reduce the discouraging effect of labour force participation and the recruitment and retention of the expatriate labour force.

To help realize labour market goals, the government proposes major reforms over 2011–2016 to promote human capital development for sustainable economic growth and to enable the transition to a knowledge economy. The government also aims to increase labour market efficiency in matching labour supply and demand in the public and private sectors.

The reform measures will contribute towards eight labour market sector outcomes.

- Expanding high-quality training opportunities for Qataris.
- Providing incentives for Qatari private sector employment.
- Boosting labour force productivity.
- Attracting and retaining high-quality expatriate talent.
- Nurturing and managing human resources.
- Improving labour market flexibility.
- Building the evidence base for policy-making.
- Enhancing employment and career counselling services.

The ambitious targets for each of these outcomes require early, effective and sustained implementation of the reforms and associated measures if they are to be met by 2016.

Integrating sound social development

Qatar's social development policy requires coordinated integration of five interrelated policy sectors: family cohesion and women's empowerment, social protection, public safety and security, and sports and culture. The aim is to bring different programmes, target groups and societal interests under a single framework to support the *QNV 2030*

social development pillar—to make Qatar a more caring and cohesive society built on sound social principles, for current and future generations.

Integrating the policies of multiple interrelated sectors within one strategy will benefit Qatar in many ways as it pursues a progressive and modern social agenda while upholding traditional family and cultural values. This approach will ensure careful consideration and proper respect of traditional Qatari culture and Arab identity, even as necessary advances are made in social equality, protection and justice. Qatar's families must remain strong and cohesive and provide a supportive environment for all. At the same time, women must be given more opportunity to contribute to the economic and cultural world without diminishing their role in the family structure.

Just as all elements of a family must work together to build a solid and stable household, all elements of a social structure must work together to build a solid and stable society. The objectives for a forward-looking integrated social development policy will be achieved through cross-sectoral strategies with the human, economic and environmental development pillars.

As Qatar continues to experience economic development and progress, and becomes more integrated into globalisation processes, the integrated social policy of the National Development Strategy 2011–2016 will lead to stronger and more sustainable outcomes, including:

- Strengthening family cohesion and women's empowerment.
- Safeguarding social protection and promoting inclusive development.
- Enhancing public safety and security.
- Promoting an active and sporting society.
- Preserving and leveraging Qatar's heritage and culture.

By building a safe, secure and stable society through strong government and family institutions, Qatar will achieve the *QNV 2030* outcomes of strong cohesive families, effective social care and protection, sound social structure and international cooperation. The National Development Strategy 2011–2016 lays the foundation for these goals with a social development strategy to enhance individual well-being without compromising Qatar's traditional cultural, Arab and Islamic identity.

Strengthening family cohesion

The family is the basis of Qatari society, the foundation for all aspects of Qatar's social structure. A dedicated commitment to marriage, a keen understanding of personal responsibility, an appreciation of traditional values, a strong bond between parent and child, a sense of mutual respect among all men, women and children—these are the characteristics of healthy, cohesive families.

Qatar's strong Arab and Islamic identity pervades all aspects of family life and continues to inform the family structure, but changes brought on by external pressures and internal evolution are changing family dynamics. The changes point to a society that is expanding its cultural imprint and progressing in positive ways while staying true to its Arab identity. Women are central to this positive, evolving nature of the Qatari family. Even as they maintain an adherence to valuable traditions, women are adapting to the impacts of modernization. They exemplify the new opportunities available to all Qataris as a result of the country's rapid economic growth and social transition.

Traditional methods of family support, care and unity will not be lost, even as Qatari society adjusts to new global realities. The government will work to assist families in caring for their members and maintaining moral and religious values and humanitarian ideals. The government will also show an increased dedication to enhancing women's capabilities and empowering them to participate more fully in the political and economic spheres.

The National Development Strategy 2011–2016 advocates for the adoption of a holistic approach

to child well-being. This approach will enable Qatar to interweave important policies to create a coherent spectrum of programmes for children of different ages to increase child well-being, leading to better human capital outcomes.

Under this National Development Strategy 2011–2016, the government will support programmes that:

- Strengthen the Qatari family as a pillar of society.
- Strengthen parental roles and reduce dependence on domestic workers.
- Reduce the incidence of domestic violence and protect and support families affected by it.
- Provide support systems for families with special circumstances.
- Reduce economic and social vulnerability and improve the financial management of Qatari families.
- Increase child well-being, child welfare and child protection.
- Improve support for working families, particularly for women.
- Increase the number of women in leadership and decision-making positions while reducing the stereotyping of women's roles and responsibilities.

Safeguarding social protection and promoting inclusive development

The social capital of Qatari society includes the institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development. In these interactions, families are important and critical, but they are complemented by the wider community, including public and private institutions. During times of rapid modernization and development, social capital can change, potentially affecting those vulnerable to diminished income. Protecting individuals from risks that may affect their abilities to contribute to society and offering assistance to individuals in need are the central components of Qatar's commitment to community care and career support.

Through the National Development Strategy 2011–2016, the government will make a firm commitment to establishing a social protection system that preserves the civil rights of all citizens, values their contribution to society and ensures an adequate income for them to maintain a healthy and dignified life. The current system provides generous support to citizens through various means, but it will be strengthened to ensure that all members of society, including the vulnerable and needy, have the opportunities to succeed through expanded employment opportunities in an inclusive society.

In promoting moves from welfare to work, the government aims to create an enabling environment to protect the disadvantaged and vulnerable and to give them an opportunity to support themselves and their families.

Efforts will also be made to broaden partnerships, involving the private sector in the social protection system. Common strategic directions and sustainable solutions will be identified through Qatar's corporate responsibility framework, sealing partnerships between the private sector and government and stakeholders of the social protection system.

During the period of the National Development Strategy 2011–2016, the government will:

- Put in place an integrated, progressive and effective system of social protection.
- Mainstream disadvantaged and vulnerable groups into society and the workforce, ensuring inclusive growth and development.
- Leverage broad partnerships leading towards a sustainable social protection system to ensure that the business community supports and contributes to the country's social protection system.

Enhancing public safety and security

Just as Qatar has a duty to provide its citizens with a secure and stable society based on strong families and an inclusive social protection system, it

has a duty to provide its citizens with a secure and stable society based on effective public institutions that guarantee public safety. A society that cares for its citizens in a respectful and dignified way is a society that operates on the principles of justice, equality and the rule of law. Qatar is committed to being such a society.

Qatar's recorded crime rates are among the world's lowest, despite a massive increase in the country's expatriate population. In 2010 Qatar ranked first within the Arab region, and 15th of 149 countries globally, on the Institute for Economic and Peace's Global Peace Index (GPI), which takes into account public safety and security and the country's external relations.

Qatar's National Development Strategy 2011–2016 for enhanced public safety moves beyond the traditional security concept to embrace the concept of human security and expands the scope of protection.

The public safety and security sector's efforts and performance will be enhanced through a programme to improve the management of crime data. It will strengthen the evidence base for improved policy-making in support of Qatar's criminal justice system.

Road safety will continue to be a priority, and the National Development Strategy 2011–2016 will build on current initiatives that have helped to reduce road accident fatalities. Recognising that more can be done to reduce road accidents, a holistic safe-system approach towards road safety will be undertaken, supported by cross-sectoral partnerships.

In fulfilling its commitment to public safety and security, the government will:

- Improve knowledge management of criminal information and data.
- Reduce the number of road traffic accidents resulting in deaths and major injuries.
- Strengthen the national approach to occupational health and safety.
- Improve building safety, including regular monitoring of regulations.
- Establish a high-level coordinated approach to national disaster management.

Promoting an active and sporting society

QNV 2030 aspires to build a safe, secure and stable society and firmly commits to creating a vibrant and prosperous future for the country. From a social development perspective, fulfilling that vision begins with strengthening families and ensuring that all citizens are protected in their homes, jobs and communities. The next step is to ensure long-term excellence beyond the essentials of family and finances by enhancing the physical, emotional and intellectual well-being of individuals, especially youth, through sports and culture.

Physical activity not only is a source of health and enjoyment for those who participate in sports, it also is often a binding element in the social and cultural fabric of society, in communities and on the international stage. Qatar has enjoyed unprecedented global recognition in sports in recent years. It invests heavily through the Qatar Olympic Committee and its partner clubs, sports federations and other strategic allies to provide sports and recreation facilities, develop athletes, host international competitions and raise awareness of the benefits of sports and physical activity.

Sports and physical activities will be incorporated within a broader preventive health agenda. The National Development Strategy 2011–2016 will increase the opportunities and make available adequate information for everyone, especially young people, to be physically active, and create an enabling environment that supports and encourages healthy and active lifestyles. The progression towards healthy and active lifestyles will further support and promote local sports participation and development.

By developing an array of first-class sports facilities, providing a structured and progressive development pathway for national athletes and continuing to host regional and international competitions

and events, Qatar will be well positioned to meet *QNV 2030*'s goal of tolerance, constructive dialogue and openness through the common sporting principles of teamwork, fairness and excellence.

Under the National Development Strategy 2011–2016, the government will:

- Educate and engage the public on the importance of healthy and active living and increase the opportunities for people of all ages and ability to take part in physical activity.
- Ensure adequate, appropriate and accessible facilities for recreational and competitive sports.
- Enhance talent development programmes for generating sporting success.

Preserving and leveraging Qatar's heritage and culture

Despite rapid socioeconomic change over a relatively short period, Qatari society has maintained the essence of its culture and continuity with the past. This continuity includes observing the fundamental principles of Islam, maintaining the inherited status and prestige of the leading families and preserving the family unit as the core of society. A primary and persistent challenge is to maintain a proper balance between modern life and the country's cultural and traditional values.

Qatar is meeting this challenge in many ways, through cultural exchanges, athletic competitions, enriched academic curricula targeting artistic development and more. The Doha Capital of Arab Culture 2010, for instance, was a successful, year-long event celebrating the arts, music and film through conferences, cultural summits and mutual knowledge sharing. Qatar is also increasing attention to its own history through enhanced preservation of heritage sites and an ongoing commitment of resources to new museums and education programmes.

By thoroughly embracing its cultural identity in the context of its diverse population, Qatar will be well positioned to protect its unique character while continuing to foster a creative and exceptional society. The National Development Strategy 2011–2016 will enable the cultural growth of Qatar's people and forge new international relationships, while solidifying Qatar's standing as a centre of Arab culture through its own distinctive national identity.

The National Development Strategy 2011–2016 will also guide the development of a strong cultural evidence-base to support future cultural policy development and improve decision-making in the cultural sector.

Under the National Development Strategy 2011–2016 the government will:

- Increase demand and support for diverse cultural activities.
- Increase youth appreciation for and participation in culture.
- Improve the management of cultural resources.
- Attract and nurture high-quality talent to stimulate the growth of the culture sector.
- Conduct research and provide information on the growth and potential of the culture sector.
- Raise Qatar's profile and standing as a cultural destination and centre for cultural exchange.

Managing environmental development

Qatar's National Development Strategy 2011–2016 for the first time explicitly aligns the growth of national prosperity to the realities of environmental constraints. By establishing a programme of strengthened environmental management across economic and natural resource sectors, the Strategy sets out a framework for continuing economic growth that avoids penalizing future generations. Advancing specific actions to conserve water, improve air quality, manage waste and protect biodiversity, the Strategy adheres to the foundational concept of intergenerational justice.

The strategy for environmental management calls for interrelated actions that cut across all areas of environmental management. Setting specific targets, it establishes a comprehensive programme to preserve the quality of life for future generations.

Water will be better conserved and protected from degradation. Gas flaring will be reduced. Expanded recycling will greatly improve solid waste management. Careful monitoring and regulation will protect vulnerable species and broadly preserve Qatar's natural heritage. Urban spaces, subject to intense construction over the past decade, will be healthier and more liveable as green spaces are added.

Cleaner water and sustainable use

Among the various environmental concerns facing Qatar, the most pressing is linked to the country's most acute scarcity—that of water. With one of the world's lowest levels of rainfall, Qatar relies on water from desalination, groundwater and recycled water, and all three face stresses. Notwithstanding the pressures, Qatar's consumption and network leakage rates are high. Per capita water use is one of the world's highest.

Qatar will enact a comprehensive National Water Act establishing an integrated system of quality requirements, discharge controls and incentives for conservation—in place of today's fragmented system of laws and regulations. The goal is a set of policies and regulations for the government to align consumption and supply over time while protecting water quality.

Cleaner air

Qatar has two categories of air quality challenges. First, various local pollutants mix with particulates in the air—including chronically high levels of dust—to cause air quality problems that contribute to respiratory illnesses. Second, carbon dioxide emissions, mostly from energy production, add to greenhouse gases and contribute to global climate change.

Qatar will develop a national policy to manage air pollution, greenhouse gas emissions and the broader challenges of climate change. All sectors of society—especially the private sector—will have a role.

Improved waste management

Affluent societies tend to produce large quantities of waste, and Qatar is no exception. With an active construction business, extensive hydrocarbon sector and growing number of high-income households, Qatar creates more than 7,000 tonnes of solid waste each day.

Qatar will adopt a multifaceted strategy to contain the levels of waste generated by households, commercial sites and industry and to recycle much more waste. In approaching the challenge of improved waste management, the government recognizes a hierarchy of actions to alleviate pressures on the environment, with the most preferable goal being the avoidance of waste. Where waste cannot be avoided, the goals would be to reduce it, reuse it and recycle it.

Nature and natural heritage sustainably managed

In Qatar, as in many countries, biodiversity is facing threats from a range of human activities. Population growth and rapid urbanization have put pressure on the delicate balance of natural endowments, crowding out some elements in the biodiversity mix. Construction and industrialization are impinging on fragile coastal habitats and disrupting marine life. International shipping and trade have introduced invasive species that pose threats for indigenous species. Overfishing has emerged as both an ecological concern and a threat to future food supply.

To support needed analysis and eventual protection of the country's biodiversity, the government will back detailed surveys that establish biodiversity baselines to enable decisionmakers to build new protections based on solid evidence. The National Development Strategy 2011–2016 envisions a series of practical steps, beginning with establishment of a central database by 2016 to inform decision-making, improve management plans and support regional activities. The database will draw on international best practice in design and could eventually be extended to cover all Gulf Cooperation Council countries.

A healthier urban living environment

Doha has grown exponentially, supported by a construction boom of striking contemporary buildings. But the capital lacks the benefits that urban green spaces provide. To continue Doha's expansion without incorporating greenery and open spaces would increase Qatar's sustainability challenges. Urban conditions would become more crowded over time, and more subject to noise and pollution. Bringing a green dimension to urban planning could strengthen sustainability and make cities more liveable.

Significant shifts in the makeup of Doha are envisioned. The government is devoting special attention to the urban environment. Although Doha's initial design did not incorporate green spaces, the government's strategy for improved environmental management calls for the city to be retrofitted in ways that more effectively balance the natural and built environments. To make Doha a greener city, the government plans a network of green spaces as ribbons of tree-lined areas rather than large, open parks.

An increasingly environmentally aware population

Successful environmental management will require active engagement through society. Large commercial corporations and policymakers have important roles, and so does every individual. There is also evidence that a deeper environmental awareness is growing. For example, schools have added environmental studies programmes to the curriculum.

The government will enlist the population in supporting and sustaining improved environmental management. The campaign to protect Qatar's environmental endowment will draw on values embedded in the country's religious and cultural heritage. The notion of protecting the environment for the benefit of future generations has broad appeal.

Strategic partnerships

Addressing environmental concerns is a cross-generational, crossborder exercise. One key function of government in the environment sector is to forge strategic partnerships with neighbouring countries as well as private firms and international organizations such as such as the United Nations Educational, Scientific and Cultural Organization, the United Nations Environment Programme and the World Health Organization, which can provide key knowledge, human resources and technology.

Qatar's environmental challenges are shared to some degree by countries in every region of the world. Qatar will adopt an outward-looking, internationalist view to build partnerships that maximize the chance of successfully adapting both policies and technologies.

Within the Gulf region countries share the challenges of hydrocarbon-driven growth and desert conditions, including water scarcity. Moreover, because pollutants do not stop at national borders, environmental problems spill over, requiring regional rather than national solutions. Strong regional cooperation will require continuous diplomacy and cooperation at all levels. Just as the national government will require national databases to support environmental regulation and policies, the Gulf region will need regional databases to support regional initiatives.

The private sector's critical role in environmental conservation and preservation is understood in the context of corporate citizenship. Companies can be a source of pollution as well as incubators of innovations that restore the ecological balance. As Qatar diversifies beyond hydrocarbons, there is clear potential for the country to become a global leader in the environmental sector. Frontier research and development initiatives currently under way at the Qatar Foundation's Qatar Science and Technology Park can help realize this potential. Doha may emerge as a global laboratory for addressing urban water tables, creating a

biodiversity database and launching a regional air quality monitoring programme.

Improved governance and outcomes

A culture of evidence-based policy-making will be needed, backed by information systems that ensure both informed decisions at the outset and continuous monitoring to guarantee compliance and, over time, measure impact. To make concrete the principles of gathering and sharing better information, the Ministry of Environment will mandate new reporting requirements, with all major industrial companies submitting quarterly environmental performance reports covering their emissions, water discharge and hazardous waste treatment. It will also provide a template for all companies to use for these reports.

The government's agenda will require organizational changes and substantial capacity—strengthening institutions responsible for the environment. Although many parts of government and the private sector will be involved, the Ministry of Environment will take the lead. Expertise from around the world will be tapped to ensure that the government has access to the most promising ideas and innovations. In time, Qatar will emerge a regional or international leader in environmental technologies and applications.

Interventions to be initiated over 2011–2016 will put Qatar on a path of environmentally sustainable development.

The environmental management strategy envisions a broad shift in laws, regulations, management systems, technologies and attitudes, working towards seven outcomes:

- Cleaner water and sustainable use.
- Cleaner air and effective climate change responses.
- Reduced waste, more recycling and more efficient use.
- Nature and natural heritage conserved, protected and sustainably managed.
- More sustainable urbanization and a healthier living environment.
- An increasingly environmentally aware population.
- Improved governance and regional and international cooperation.

Developing and modernizing public institutions

Many of the challenges and opportunities in the National Development Strategy 2011–2016 transcend the traditional boundaries of individual public agencies, and thus require a higher level of interagency collaboration and cooperation. A whole-government approach will be adopted to address cross-cutting issues. Agencies will work across portfolio boundaries as an integrated government. This approach will be applied to policy formulation, to programme development and to the delivery of outcomes.

Public sector reforms will be customer-oriented, with delivery systems and interfaces improved and centred around people and businesses. To speed decision-making and execution, greater authority will be provided to selected agencies—tied to increased capability and accountability. To enhance delivery, competition and market mechanisms will increasingly be introduced.

Institutional development and modernization of Qatar's public sector will require a phased, prolonged effort to achieve well planned structural change. Initially, in a foundation building phase, change will be focused on achieving ownership by all ministries and agencies, including that of public sector employees. Change management will balance the pace of reform with the ability to incorporate and sustain it.

Two linked concepts—based on benchmarking best practices in other countries that have successfully modernized their public sectors—underlie institutional development and modernization. One is the set of drivers of modernization, factors that influence performance and the need to

modernize and that serve as measures of institutional success: the public sector's efficiency, effectiveness, value creation, transparency, accountability, relevance and customer engagement. The other is the set of levers that institutions must apply to modernize: policy and planning, budget and financial management, human resources development, organizational alignment, procurement, institutional processes, information technology and performance management.

As part of the situational analysis and diagnostics for the institutional development and modernization strategy, government central functions, ministries and agencies responded to a questionnaire intended to assess the levers that institutions need to apply to enhance public sector performance. From the whole-government response, the policy and planning and performance management levers stand out as requiring greatest capacity improvement. At the institutional level there is considerable variation among ministries and agencies in the ranking of the levers, with performance management, human resources and policy and planning offering opportunities for capacity development.

To build a strong foundation, two programmes must start during the planning phase: expanding the support of central government functions and developing a public sector performance management framework. Because many line ministries and agencies lack the capabilities needed to implement all the National Development Strategy 2011–2016 projects, the central functions in government will provide coordination among ministries, offering objective advice and defining challenges that cannot be addressed by a single ministry. The performance management system will focus efforts and resources on ensuring that the National Development Strategy 2011–2016 is implemented successfully.

Key performance indicators will inform ministries and government agencies about gaps in performance and ways to bridge them in moving forward, as will a set of whole-government indicators for measuring countrywide outcomes. As the performance management system becomes more embedded in the reporting structures of government, the number of indicators will be expanded.

Careful sequencing of projects will accommodate links across the levers for public sector modernization: for example, capacity building in finance to reform budgeting processes and in information and communication technology to develop citizen-centric platforms and a central database. Intermediate steps for modernization have been benchmarked, and short- and medium-term targets set. Building on this information, targeted projects have been developed, prioritized and sequenced over 2011–2016, for government as a whole and for individual institutions.

A three-phase building block approach to modernization has been developed. The first and longest phase is laying the foundation for capabilities at the whole-government level. The second phase is embedding institutional capabilities. The third phase is developing cross-institutional excellence in delivering services.

During much of the National Development Strategy 2011–2016 period, institutional development and modernization will be devoted to the foundation stage and to six focus areas:

- Strategic policy and planning.
- Budget and financial management.
- Organizational alignment.
- Human resources development.
- Enabled institutional processes.
- Performance management.

Each focus area derives from the levers of public sector performance, but all have outcomes that directly affect the seven drivers of public sector performance: efficiency, effectiveness, value creation, accountability, transparency, engagement and relevance.

For these six focus areas, 16 targeted projects on the whole-government have been designed to bring Qatar's public sector up to best practice. These

projects are part of the first foundation-laying step in the long-term modernization journey. Each project addresses a major gap, with its timing and implementation depending on the capacity and readiness of each institution. The proposed projects allow setting clear targets and refining them as the projects are planned and implemented. They will be reviewed and adapted, as needed, in a collaborative process with the lead stakeholders.

The national institutional development and modernization programme will promote an outcome-based approach to strategic planning as an effective means of managing resources and advancing transparency and accountability. It will foster a culture based on performance and cultivate the development of public service delivery–oriented mind-sets.

Advancing from strategy to implementation

Qatar's National Development Strategy 2011–2016, comprehensive and multidimensional, presents different implementation challenges in its different parts (table 1). While the process of building the machinery for implementation has already started, it needs to be accelerated and the achievements need strengthened.

Successful implementation will depend first and foremost on the demand by the country's leadership for regular information on progress and results. It will also depend on mainstreaming the strategy across the whole government. Ministries and agencies will need to take ownership of the strategy within their own operational plans and accept accountability for delivery. At the centre, the strategy will have to influence processes that drive crucial decisions on how resources get used and provide operational tools that allow specific projects and policy proposals to be assessed in an integrated way. Significant challenges lie ahead, particularly in building the human and institutional capabilities for effective planning and project execution, but also in providing the legal basis for some of the proposed changes.

Moving from the identification of strategic responses (see table 1) to the implementation of specific interventions requires careful planning by implementing agencies, supported by the centralized functions of government. The concepts and targets identified in the Strategy and background sector reports will need to evolve into detailed project blueprints driven by a focus on achievable results that support the key strategic goals.

These blueprints must include logical assessments anchored in sound diagnostics, proven approaches and learning; the identification of measurable outputs, outcomes and impacts against which progress can be measured and evaluated; clear identification of accountabilities; and built-in mitigation measures that address identifiable risks. Of course, the financial and human resources needed to manage and implement the project and then to sustain its benefits must be in place. And project risks and success will be critically influenced by stakeholder awareness, understanding and ownership.

Under the National Development Strategy 2011–2016 a portfolio view of projects is needed to ensure proper integration and sequencing of activities, to direct resources to priorities and to provide "value for money". At the level of the implementing agency, this portfolio perspective will emerge through the development of strategic and operational plans within a broader sector focus. At the national level, funding priorities will be articulated through reformed budget processes and a programmatic approach to public investment planning.

To implement the National Development Strategy, ministries and agencies will need competent project management functions. Where these do not exist, they will need to be established as a priority. In other parts of government, existing functions may need to be strengthened. Over what could be an extended transition period, some agencies may have to "buy-in" such services, but this must be under arrangements that successfully transfers knowledge and builds national capabilities. Human resources constraints will also need to be addressed across a much broader front.

Table 1 Qatar's 20 key challenges

Qatar National Vision 2030 pillar	Major challenges	Strategic responses
Promoting sustainable prosperity	Ensuring sustainability in a setting where hydrocarbon resource depletion is still the dominant source of income	Establishing a hydrocarbon depletion policy; sustaining high rates of saving and making sound investments in human, capital and financial assets for the future
	Promoting stability in an environment where hydrocarbon price volatility creates risk and presents challenges for calibration of economic policy	Reforming budgetary and fiscal processes, public investment programming, liquidity management and domestic capital market development
	Enhancing efficiency in the use of all resources to support high standards of living for current and future generations	Promoting competition, trade and investment; improving regulation; strengthening demand management for water, power and fuel; reforming agriculture
	Diversifying the economy to create durable wealth and support wider societal viability	Bolstering enterprise creation and private sector development; improving the business climate, strengthening regional integration; reforming the labour market
Promoting human development	Rebalancing the healthcare system to reduce the emphasis on hospital-based care and increase integration between levels of care	Establishing an integrated healthcare system to shift the balance of care towards a patient-focused, preventive and community-based model
	Meeting critical needs for a high-quality workforce across the health sector (and affecting other sectors)	Developing and implementing a national workforce plan that takes a multifaceted approach and optimizes the skills mix
	Raising the achievement of Qatari students at all levels, especially in math, science and English and, through that, increasing educational attainment	Strengthening reforms in K–12 and higher education to ease demand and supply constraints
	Coordinating education and training providers and aligning with labour force needs	Addressing quality, efficiency, inclusiveness and portability across the entire education and training systems
	Aligning labour market composition of Qataris with the objectives of a diversified knowledge economy	Realigning demand and supply in the Qatari workforce, with an emphasis on continuously upgrading skills
	Reducing reliance on low-cost, low-skilled foreign labour	Reviewing the sponsorship law and identifying ways of attracting and retaining higher skilled expatriate workers
Taking an integrated approach to sound social development	Balancing the forces of modernization and globalization with the support of traditional Qatari family values and patterns of family formation	Implementing cross-cutting measures to strengthen family ties, values and relationships
	Strengthening social inclusiveness	Launching a multistakeholder programme that strengthens an inclusive social protection system
	Improving road safety and ending the growing epidemic of traffic accidents, particularly among youth	Introducing a holistic approach to road safety, with cross-sectoral partnerships
	Preserving traditional Qatari culture and Arab identity	Using culture as a platform to safeguard and develop Qatar's national heritage
	Encouraging a more active lifestyle for young people, to reduce the health-related risks of inactivity	Promoting local sports participation and development as part of a comprehensive, active lifestyle programme
Sustaining the environment for future generations	Reforming unsustainable water consumption patterns	Establishing an integrated water management plan across the value chain
	Encouraging sustainable urbanization and consumption patterns that reduce environmental stresses	Promoting more sustainable urbanization and a healthier living environment
Developing modern public sector institutions	Strengthening weak institutional capacities	Strengthening the role of central functions to support institutional development and modernization
	Expanding human resources capacities across the public sector	Applying policies to attract talent, including staff development programmes
	Establishing a centralized system for managing for results and for linking resource allocation to strategic plans	Launching a public sector performance management framework linking institutional performance to strategic plans and budgets

Human resources shortages in key sectors could undercut delivery of key outcomes. For example, the Strategy calls for a large expansion of primary and preventive healthcare. But Qatar has only 1.9 primary care physicians for every 10,000 people, far below the World Health Organization recommended level of 5.6. This picture of acute skill gaps permeates the public sector.

To respond to constraints on human capabilities in the public sector, the Cabinet's Central Human Resources Department will lead efforts to create a central recruitment plan. Ministries assigned responsibility for managing particular programmes will as a priority carry out skills assessments and identify gaps that need to be filled. Partnerships with universities, the private sector and others will be explored as a means of bridging capacity shortfalls. But to ease human resources constraints, it may be necessary to modify the 2009 Law on Human Resources Administration so that it does not inhibit efforts to retain Qatar's best talent in the public sector. Given the small number of citizens, the increasing demands on government and the complexity of Qatar's economy and society, a strategic and flexible approach to the recruitment of high-level experts and specialists in the global market place will be considered.

Building local capabilities in the public sector is an imperative. A concerted capacity-building effort across all sectors of government will be spearheaded by the Institute of Administrative Development, supported by the Cabinet's Central Human Resources Department. The Institute will build and operate a world-class training centre to help agencies develop the capabilities they need to realize their strategic goals and to assist Qataris in developing their career potential.

Budget resources will be made available to support identified National Development Strategy priorities. Funds will be allocated for recruiting new personnel in areas where skill gaps need to be filled or for procuring professional technical and advisory services. Initially, limited resources may also be made available to support needed capital expenditures. The Ministry of Economy and Finance's Budget Call Circular will set the policy and provide technical and fiscal parameters to guide budget preparation. The central functions of government will provide targeted support for implementing agencies as they adjust to new arrangements.

The FY2011 budget will be prepared under the Budget Law of 1989. However, a functional classification of expenditure (based on the United Nations definition of government functions and sectors) will be piloted to support sectorwide approaches to budget preparation and to pave the way for programmatic budgeting focussed on results. Concerned agencies will work collaboratively to prepare budgets for projects that serve common (programme) goals. In this context, the Ministry of Economy and Finance will consider agency budgets together and consult with agencies as a group rather than bilaterally.

Beyond FY2011 momentum will build towards programmatic budgeting, anchored in a new functional classification of expenditures and based on strategic and operational plans developed and owned by ministries and agencies. New templates and technical guidelines for the preparation of projects and budgets will be prepared to support budget modernization processes, and relevant training will be provided. By FY2013 or FY2014, it is anticipated that significant capital projects will be considered within a public investment programming framework that would support a portfolio based assessment. By that time, too, fiscal planning parameters will be firmly anchored in a forward looking macro-fiscal framework.

Successful implementation will require closing information gaps. In the process of preparing the National Development Strategy, much new information has been unearthed, but a strategic, systematic and sustainable approach is needed for collecting and disseminating statistical information. The Qatar Statistics Authority is mindful of these needs and working to meet them.

The participation of stakeholders and target groups in project design and implementation can raise awareness, increase trust and ownership, lead to better project design, reduce risks and heighten the chances of beneficial results. But robust participatory processes may not always be sufficient. Some goals will be achieved only if the government persuades other actors to alter their attitudes and behaviours**.** To support some elements of the National Development Strategy 2011–2016 strong advocacy campaigns will need to communicate clear messages.

The final ingredient of successful implementation is monitoring and evaluation to support learning and better decisions.

At the project level, successful implementation requires built-in systems to monitor outputs and results. Through active and continuous tracking of milestones at the ministry and agency level, the government can gather critical information on performance and strengthen accountability for delivering agreed outcomes. Active monitoring of project performance will enable implementing agencies to identify obstacles and tackle them before they derail projects or jeopardize outcomes.

At the sector level, systems will aggregate information and distil lessons that have broader applicability. In due course, sector spending reviews could be considered, as might sustainable development audits. Consideration will be given to where within government the new review functions would be located.

At the national level, evaluation will be an important source of knowledge about what has worked or not worked—and about why and how social, human, economic and environmental dimensions of the Strategy have interacted.

A mid-term assessment of the National Development Strategy at project, sector and national levels in the second half of 2013 will inform future refinements of strategic directions.

* * *

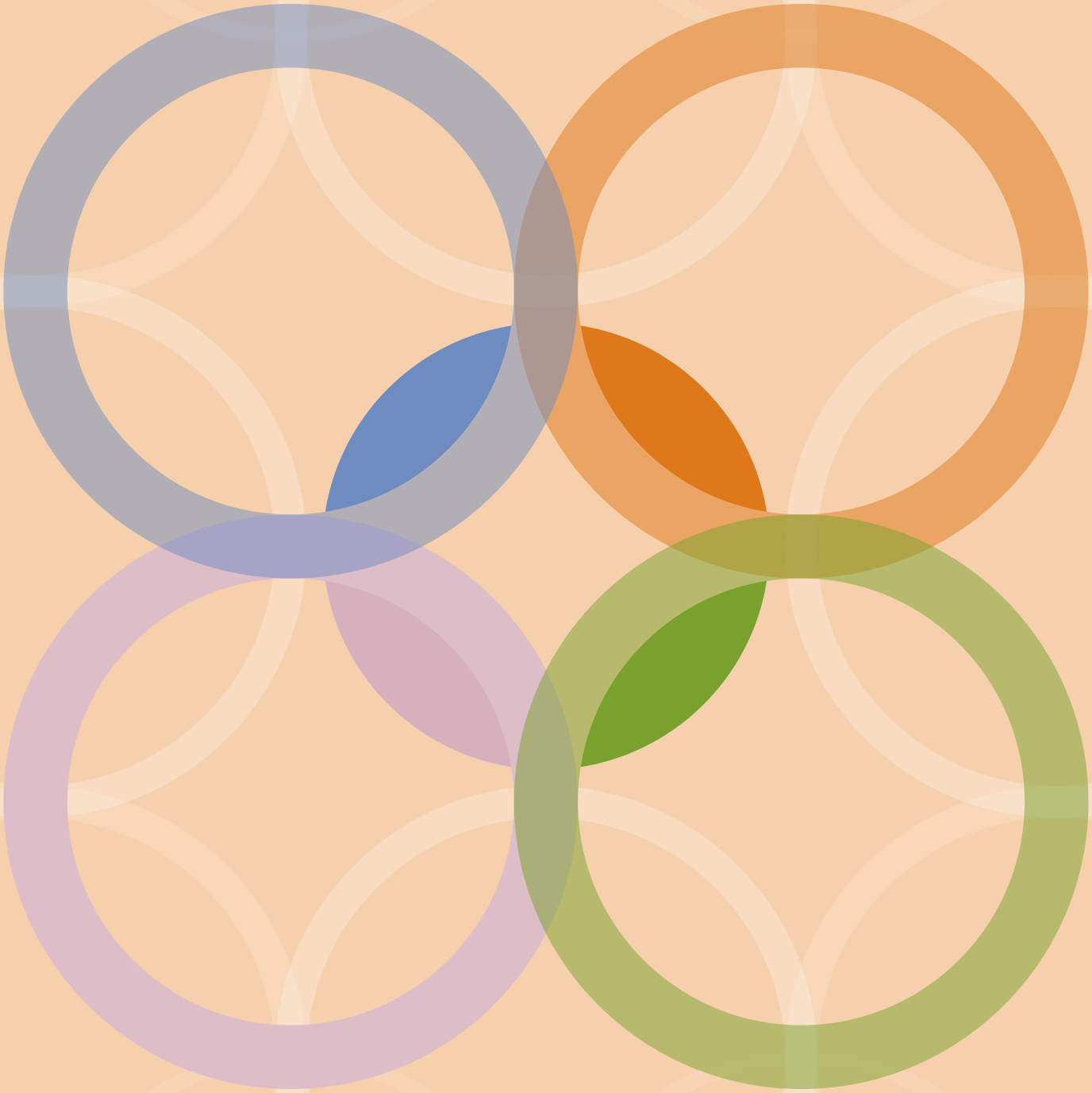
In the pages that follow, Part 1 of the National Development Strategy 2011–2016 describes how the Strategy was prepared and how it addresses the major challenges identified in *QNV 2030*. It also presents the broadly favourable economic outlook for 2011–2016 and the resources likely to be available to support the Strategy. Part 2 goes into considerable detail on the goals, outcomes and targets for each of *QNV 2030*'s four development pillars: sustaining economic prosperity, promoting human development, taking an integrated approach to social development and sustaining the environment for future generations. Part 3 identifies the programmes and priorities for developing and modernizing public sector institutions in support of the Strategy. It also charts the pathways for implementing the Strategy's many programmes and projects, stressing the imperatives of monitoring and evaluation to gather critical information on performance to the strengthen accountability for delivering the agreed outcomes.

Part 1

Agenda and resources

Chapter 1

Building Qatar's first development strategy



1 Building Qatar's first development strategy

Qatar stands at a defining juncture. After unparalleled economic expansion that has created widespread prosperity, the government has produced Qatar's National Development Strategy 2011–2016, in line with *Qatar National Vision 2030 (QNV 2030)* and guided by Qatar's Permanent Constitution, to take this prosperity into the future.

QNV 2030 established a framework of aspiration, calling for programmes and projects that ensure sustainable prosperity for future generations. After launching *QNV 2030* in October 2008, the government led an extensive process of stakeholder consultations, studies and analyses that culminated in this National Development Strategy 2011–2016. The Strategy identifies specific actions and outcomes to overcome challenges and advance *QNV 2030* goals.

The Strategy recognizes that in less than a generation, through development of substantial hydrocarbon resources, Qatar has supported a phenomenal economic and social transformation. Per capita income is the highest in the world, basic and secondary education are universal and child mortality has been substantially reduced.

But Qatar's surging economy has relied on the influx of a large expatriate workforce, generating a rapid increase in population, especially over 2006–2009. Accelerated urbanization, mega-development projects and a rising demand for scarce resources—particularly water—have generated stresses. Modernization is challenging the traditional Qatari family, national identity and cultural values and straining health and education services.

Qatar's rapid change necessitates taking stock of needs and finding new approaches to sustainable development consistent with *QNV 2030*'s chosen path for the future.

QNV 2030 re-establishes core values while embracing future goals endorsed by all sectors of society. It reflects national aspirations, objectives and values. However, a national vision—even one that calls for long-term transformation—is not a blueprint for action. Reaching the action stage requires following through on the vision by designing a development strategy that sets out specific programmes and projects for political leadership to initiate over a given timeframe. While *QNV 2030* lays a foundation, it is the implementation of the strategy that drives the long-term transformation of society through economic and social development.

From vision to strategy: tackling the big challenges

Qatar's sound management of its hydrocarbon resources will continue to improve standards of living. But economic growth cannot be the only goal; other values are also vital. Qatar's National Development Strategy 2011–2016 aims to balance the five major challenges identified by *QNV 2030:*

- Moulding modernization around the preservation of Qatari culture and traditions.
- Balancing the needs of this generation and those of future generations.

- Managing growth and avoiding uncontrolled expansion.
- Matching the size and quality of the expatriate labour force to the selected path of development.
- Aligning economic growth with social development and environmental management.

Preserving cultural traditions in a global, interconnected world is difficult. The wider choices accompanying economic and social progress can challenge some deep-rooted social values. Yet it is possible to balance modernity and tradition, reaping the benefits of economic and social development without sacrificing the stabilizing effects of cultural continuity.

In following a path of sustainable development, Qatar will strive to meet the needs of this generation without compromising those of future generations, ensuring what is often called intergenerational justice. Adhering to this framework, the government will efficiently invest the financial returns from hydrocarbon wealth, delivering high returns. Because overly aggressive economic development could tip the environmental scales irreversibly, Qatar is choosing a development path that ensures continuing economic growth without unduly harming the environment or disadvantaging future generations.

Qatar is setting a development pace consistent with sustainable improvements in livelihoods and quality of life. An unrestrained and imbalanced economic growth pattern depletes resources, overstrains the economy and derails the overriding objective of sustainability. Stresses from economic overheating or financial imbalances can manifest themselves in rapidly rising prices which, if persistent, create economic and social vulnerabilities.

Qatar's current population growth stems from massive urban development, large-scale investment projects and rising government expenditures, which have led to a large increase in expatriate workers. To determine the suitable size and quality of its expatriate labour force, Qatar will weigh the consequences of recruiting workers from overseas—compromised cultural rights, increased housing and public service needs, diluted national identity—against the anticipated economic benefits.

Development can have negative effects on the natural environment. Environmental degradation can, however, be reduced through advanced technologies. But a development pattern based on the energy industry means that some environmental impacts are inevitable. Qatar is committed to enforcing international standards for environmental protection when designing and implementing industrial projects and to making its future development path compatible with protecting and conserving the environment.

Preparing the National Development Strategy 2011–2016

National development is a long-term process that requires policies and investments at every level of government. To manage multiple changes effectively, governments mobilize commitment to an expanded set of goals and develop capacities to respond to new challenges. Development, which is a continuous process, brings about a broad societal transformation that better prepares people to realize their potential and to pursue the life they have reason to value.

Thus a development strategy sets out specific actions to help the country realize its goals, along with the necessary mechanisms for monitoring progress and making mid-course corrections when needed. Qatar will be alert to feedback from the economy, ready to adjust the programme where necessary. In this way the strategy is organic, evolving to meet changing conditions.

Identifying national initiatives

Qatar's National Development Strategy 2011–2016 translates *QNV 2030* into specific actions and targets that represent the first wave of changes to launch the next chapter of Qatar's transformation.

Developed through a combination of top-down and bottom-up approaches (figure 1.1), Qatar's National Development Strategy 2011–2016:

- Identifies the most critical development goals and challenges.
- Outlines strategic initiatives aligned to *QNV 2030* goals.
- Provides strategic coherence for national development planning and budgeting—moving from ad hoc development projects to forward-looking, outcome-based planning.
- Strengthens public sector institutions and enhances implementation capacity for carrying out planned reforms and programmes, ensuring that cross-cutting issues are addressed.
- Builds in an adequate resource framework for effective implementation.

Consulting broadly

Preparation of Qatar's National Development Strategy 2011–2016 was highly participatory and inclusive across society. Qataris and non-Qataris from all sectors were energized, enthusiastic and engaged. Stakeholder engagement spread from ministers and prominent leaders involved in executive groups to countless public, private and civil society sector participants in 13 cross-sectoral task teams (figure 1.2). (The Task Team for Culture and Sport divided and produced separate strategies, so 14 strategies were produced in all.) Each task team was led by a key agency, but all 13 included broad government participation and sought inputs from an array of stakeholders, often through multiple sub-Task Teams.

The extensive intersectoral consultations, including interviews, discussions, debates and research, were important for building a strategy that would enjoy strong and positive public ownership from the outset. Moreover, the government benefited from a variety of inputs that have been crucial in identifying important weaknesses to be addressed through policies, regulations and investments.

The General Secretary of Development Planning (GSDP) played a coordinating role through the establishment of a National Development Strategy Project Management Office. The office, with the support of other GSDP departments, developed templates, draft terms of reference and provided technical support to each task team.

Each task team prepared comprehensive national sector strategies defining sectoral priorities. These strategies, like the larger process, were developed collaboratively using detailed situation analyses,

Figure 1.1 The National Development Strategy 2011–2016 was developed through a combination of top-down and bottom-up approaches

Figure 1.2 Preparation of the National Development Strategy 2011–2016 was broadly participatory and inclusive

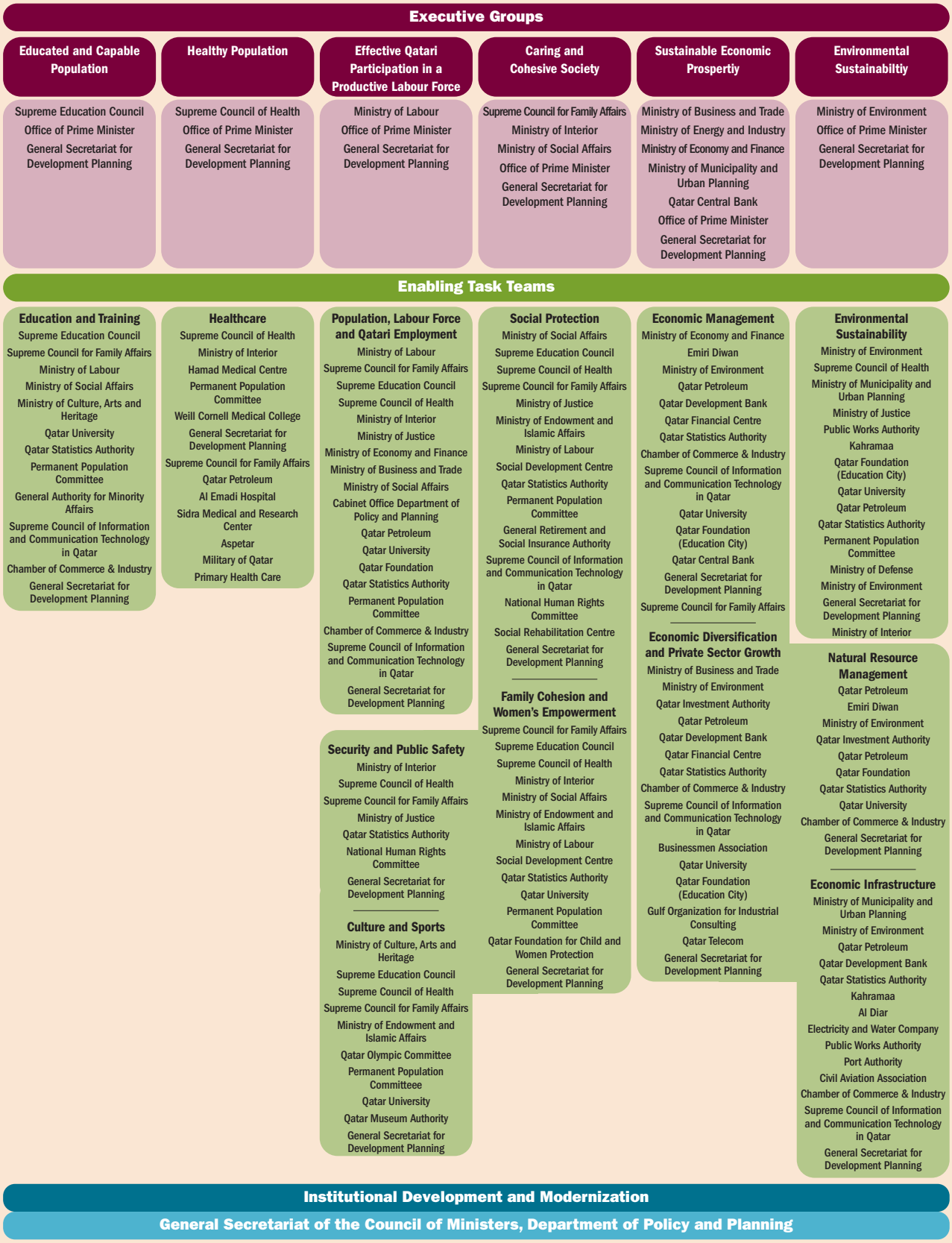
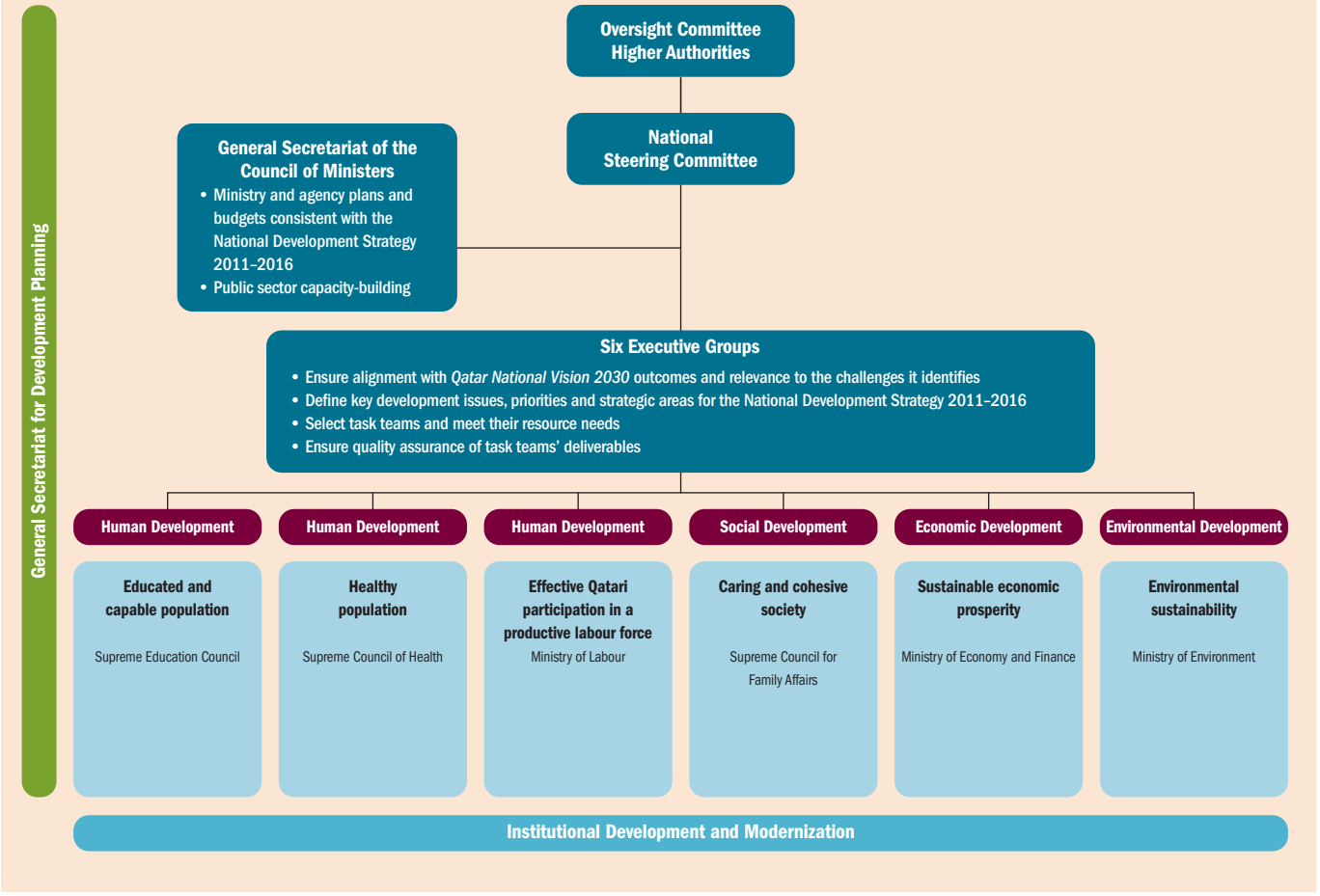


Figure 1.3 The National Development Strategy 2011–2016 organizational structure



diagnostics and benchmarking of best regional and international practices. Each strategy was then approved by one of six National Development Strategy 2011–2016 executive groups and the National Steering Committee (figure 1.3). Qatar's National Development Strategy 2011–2016 was formulated by integrating the 14 sector strategies.

National Development Strategy 2011–2016 programmes and projects

Aligned to the *QNV 2030* goals, the programmes and projects identified in the National Development Strategy 2011–2016, including outcomes and targets, are from the 14 sector strategies (see page xiv). Developed through an extensive consultative process, taking into account the many cross-sectoral links, these reports provide profound and transparent analysis, benchmarking, diagnostics and prioritizations for each of the programmes and projects at a much more detailed level than is possible in this Strategy. Some programmes and projects identified in this Strategy are ongoing, some are in the early planning stages, and some are entirely new initiatives.

The targets in the Strategy, a subset of those in the sector strategies and developed with stakeholder inputs, focus on the results to be achieved by 2016. Both quantitative and qualitative, they will be reviewed and refined, as necessary, by key stakeholders at the beginning of programme and project implementation. This refinement will strengthen ownership and promote a culture of outcome-based planning and managing budgets for results.

Each sector report has project templates to identify the key activities, placed within indicative

sequenced implementation timelines, to achieve the desired outcomes. The priorities for programmes and projects, as well as the timelines, will be reviewed by the ministries and agencies.

The sector reports also provide the indicative resource requirements for each programme and project—identifying the key stakeholders in the projects and the risks and mitigation measures for successful implementation. In addition, some cross-sectoral links for each programme and project are given to improve policy coherence. Especially important, each report contains a basic monitoring and evaluation framework, supported by selected monitorable indicators, to enable adjustments during implementation.

Growth with balance

Qatar's National Development Strategy 2011–2016 calls for initiatives that will create the foundations of sustainable prosperity, which can be achieved only if the value of the nation's productive base expands—its constructed capital assets, infrastructure, human and social capital, natural endowments, technology and institutions. Growth of the productive base provides the foundation for raising living standards for a growing population and expanding opportunities for future generations.

The National Development Strategy 2011–2016 brings fresh thinking to the forefront with its emphasis on balance and sustainability. Economic prosperity will be balanced with environmental goals, and concerns and opportunities that create benefits in both areas are emphasized. Likewise, economic stability will support broader social and human development. The development of human, institutional and social capabilities is integral to expansion of the productive base. Initiatives that support development in these areas will provide a platform for enhanced productivity growth and efficiency and will create greater space for the private sector.

As part of its broader economic strategy, Qatar will continue to exploit its rich hydrocarbon endowment and further develop its energy-intensive petrochemical and metallurgy sectors, consolidating its position as a major force in world energy markets. At the same time, however, the country will look for opportunities to diversify its productive base into new areas that add to resilience and provide sustainable avenues of wealth creation.

Four interrelated pillars of development

The programmes and projects of the National Development Strategy 2011–2016 reflect Qatar's development priorities and are linked to four interrelated pillars of development.

Economic development

The government is committed to the responsible exploitation of Qatar's hydrocarbon resources and the wise investment of the proceeds for the benefit of current and future generations. Investments in infrastructure, people and institutions will continue to receive priority and will provide the foundations for new capabilities and an emerging knowledge economy. Greater resilience will be achieved through strengthened arrangements for economic management. A concerted drive towards greater economic efficiency and improved competitiveness will provide a platform for advances in productivity and economic diversification.

Human development

Qatar will continue to invest heavily in modern health and education systems built to the highest international standards and to provide all citizens with access and opportunities to realize their potential. A comprehensive, integrated system of healthcare will help all people in Qatar live longer and healthier lives. It will also enable them to participate fully in economic, social and political life and contribute to sustaining a prosperous society. Education and training programmes will strengthen Qatari values and encourage analytical thinking, innovation and entrepreneurship. The capacities and skills of the labour force will be continuously upgraded and aligned with social and

economic priorities. Developing human capacities, especially in science and technology and through research and development, will support the broader goal of engaging Qataris in a wider range of economic activities as the economy evolves.

Social development

The government will promote strong family values and an effective social protection system for all Qataris, ensuring them an adequate income to maintain a dignified life. Broadening and deepening democratic institutions, including giving civil society a voice in social policy, are foreseen. Initiatives will be undertaken to further empower Qatari women in economic and political spheres and provide equal opportunities for them to participate at all levels of society. The criminal justice system will be strengthened to ensure the safety and security of all people living in Qatar. Measures will be undertaken to preserve the country's national heritage and culture, enhancing Arab and Islamic Qatari values and identity. The government will continue to provide progressive development pathways for national athletes. It will continue to host regional and international competitions and events, thereby encouraging national sports development.

Environmental development

Qatar will build an environmental management system, aligned to the growth of national prosperity, to minimize avoidable depletion of scarce resources, especially water, and promote sustainable use. The government is also committed to improving air quality, reducing waste and increasing recycling. Stronger efforts will be made to protect Qatar's national heritage and biodiversity. The National Development Strategy 2011–2016 environment agenda encourages more sustainable urbanization and a healthier living environment. Awareness programmes will encourage a sense of shared responsibility towards the environment, along with the development of positive environmental attitudes and values. Qatar will also proactively engage in regional and international cooperation programmes that promote green technologies and support sustainability.

Intersectoral links

National Development Strategy 2011–2016 programmes and projects in the four areas are strongly interrelated and mutually reinforcing. For example, planned improvements in the education system will produce graduates better prepared to participate in a modern global economy that emphasizes knowledge-based services, healthcare and green technologies. In this way, the education initiatives will help build a high-quality workforce to support goals for improved healthcare and provide expertise for designing environmental policies and technologies. In turn, increased participation in these sectors also serves the economic goal of broadening the productive base and diversifying opportunities for future generations.

Institutional capacity

Successfully implementing the National Development Strategy 2011–2016 programmes and projects is contingent on modernization of Qatar's public sector. This will require transforming institutions through capacity-building programmes, creating a culture of innovation and performance-based management and improving public service delivery. This will also require strengthening core values that instil positive attitudes and productive work practices. Interagency collaboration will be critical to ensure that the reforms are coherently designed and efficiently implemented.

A programme for the entire society

The government will take the lead to deliver on the National Development Strategy 2011–2016. To achieve the targets, Qatar will strengthen public sector institutions, expand human resources capacities and create new structures. Partnership with civil society, academia and the private sector will be critical to achieving many of the outcomes.

In some areas, the government will act as an advocate, encouraging other actors to shift behaviours in ways that advance the goals of the National Development Strategy 2011–2016. For example, to raise awareness of the need to conserve water and power, the government will lead the drive to inform key audiences of the nation's vulnerabilities and the dangers of wasting nonrenewable resources. For the strategy to achieve its goals, households will have to change behavioural patterns. Owners of commercial buildings will need to be more conscious of sustainability concerns and support and adopt energy conservation practices.

Creative partnerships, investments and incentives can accelerate progress. Through a public investment programme, the government will manage its capital budget to ensure that projects are consistent with the National Development Strategy 2011–2016. To bring in private sector management expertise, along with knowledge of markets, inputs and technologies, some priority projects will be structured as public-private partnerships.

The government already has spearheaded a string of creative efforts that will help Qatar diversify beyond hydrocarbons. The Qatar Science and Technology Park is accelerating research, and the Qatar National Research Fund is backing promising innovations. Enterprise Qatar, Qatar Foundation, Qatar Financial Centre and Qatar Development Bank are supporting efforts to lessen Qatar's dependence on hydrocarbon exports and speed the transition to a knowledge-based economy.

The National Development Strategy 2011–2016 also identifies key infrastructure for which government investment can drive a new pattern for the economy. Priority infrastructure investments targeted for 2011–2016 include wastewater treatment facilities, recycling centres, primary healthcare facilities, centres for higher education and skills training, recreational spaces, and road and rail connections.

In addition, government participation through public-private partnerships and startup investments will help jumpstart firms in new sectors of the economy. The more diversified economic base will generate expanded opportunities for the next generation while buffering the economy from wide fluctuations in world energy prices.

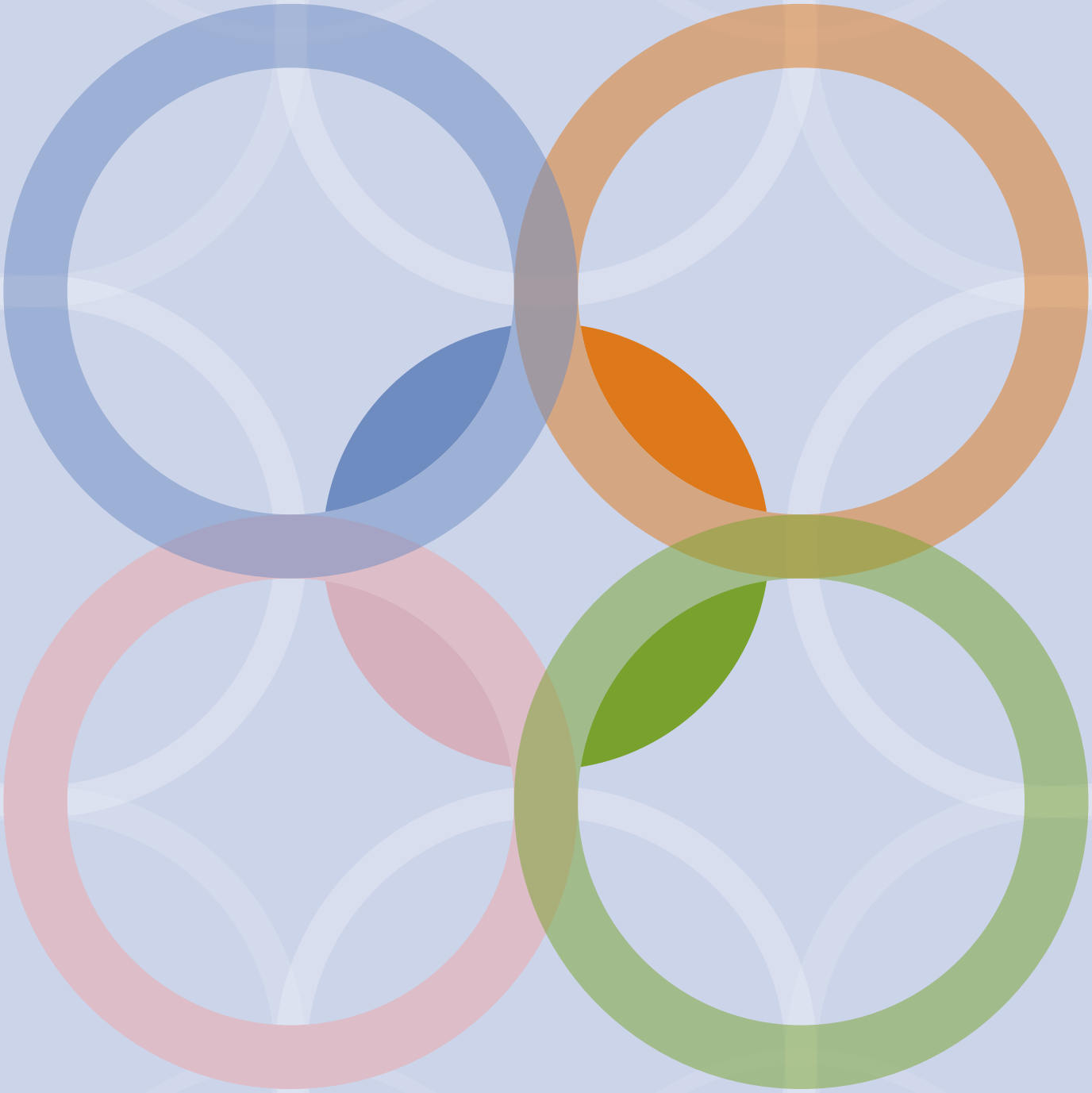
Building on momentum

Qatar's National Development Strategy 2011–2016 is a plan of action. It presents new initiatives while building on what already exists. For projects, policies and institutions already under way, it provides added impetus and focus.

Keys to success as the National Development Strategy 2011–2016 unfolds will be attention to measurable outcomes in each area, effective implementation, monitoring and evaluation, accountability, and cross-sectoral cooperation and coordination.

Chapter 2

Achievements and economic outlook 2011–2016



2 Achievements and economic outlook 2011–2016

On the way to achieving the many advances detailed in *Qatar National Vision 2030 (QNV 2030),* Qatar has built a solid foundation for embarking on the National Development Strategy 2011–2016. Rapid growth in the 2000s, the fastest in the world, has given Qatar one of the world's highest per capita GDPs. High saving, both private and public, has been reflected in substantial domestic investment and sizeable accumulation of foreign assets. Policy improvements and institutional advances have supported this remarkable economic performance. Rapid development of the financial sector, with fast expanding banking and equity markets, has served the needs of a larger and more complex economy.

The economic prospects for 2011–2016 are broadly favourable, with the global recovery continuing, thanks to robust growth in emerging markets and rebounding world trade. The growth of hydrocarbon income will tail off, but its level should remain high, and expansion elsewhere in the economy will help keep overall GDP growth buoyant. Transport and communications, along with business and financial services, could grow vigorously. Construction will grow steadily, and manufacturing growth should improve.

A substantial pipeline of infrastructure investments is planned for 2011–2016, amply meeting Qatar's infrastructure needs in most areas through 2016 and beyond. Although infrastructure investment will place large demands on the state's resources, the government's overall fiscal position should remain healthy. Anticipated fiscal resources will be adequate to support the initiatives of the National Development Strategy 2011–2016. The main impacts of preparation activities for the International Federation of Association Football (FIFA) World Cup 2022 are not expected until the latter part of the period and beyond.

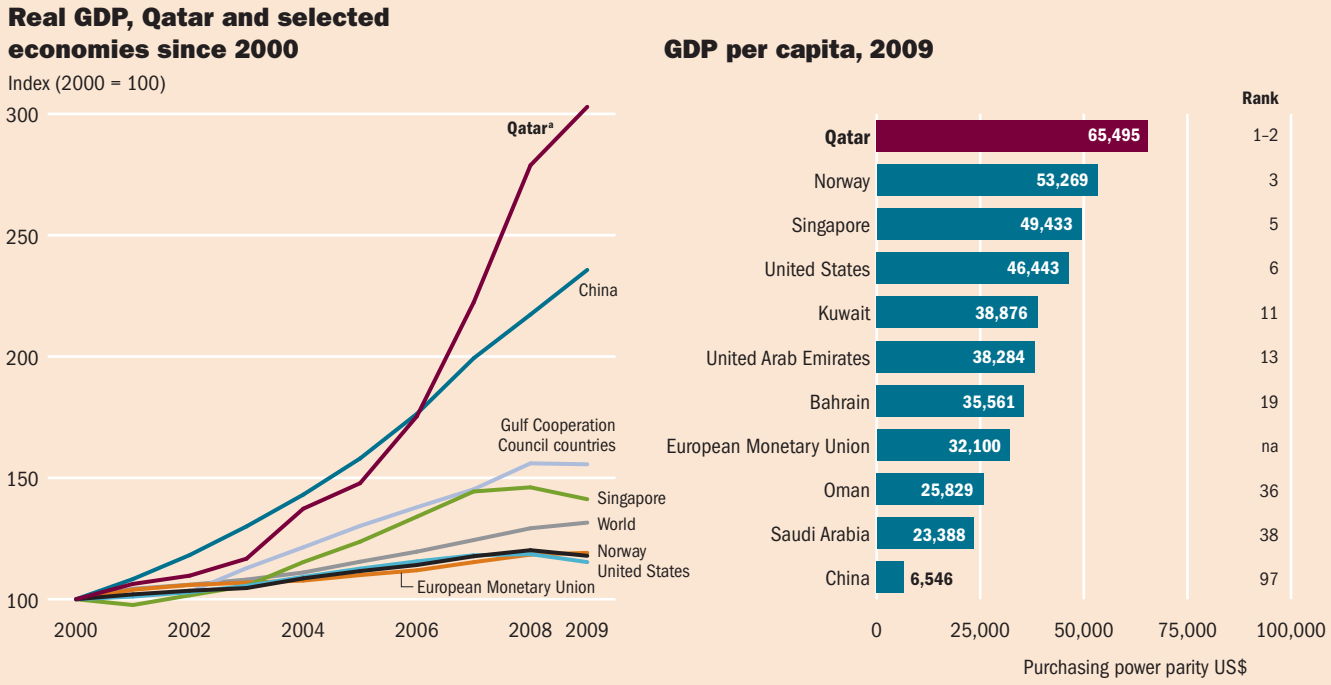
A solid foundation for the future

Between 2000 and 2009 Qatar's real GDP grew at an annual average of 13.1%. Over this period Qatar's economy has grown faster than any other, and, measured in purchasing power parity terms, its per capita GDP is now among the highest in the world (figure 2.1). Much of this expansion has occurred since 2004—from 2004 to 2009 real GDP growth averaged 17.1% a year.

Volume measures of GDP growth, large as they are, understate the true expansion of real domestic income because they do not capture the large gains in Qatar's terms of trade that are a result of rising energy prices. Estimates from the General Secretariat for Development Planning suggest that terms of trade gains alone doubled real income during 2004–2008.

Good governance has been a notable factor in Qatar's economic success. Qatar compares favourably with other countries on corruption and governance indicators, and particularly favourably when compared with other resource-abundant

Figure 2.1 Qatar has grown faster than any other economy, and its per capita GDP is now among the highest in the world



na is not applicable.

a. GDP 2004–2009 adjusted using revised GDP data from Qatar Statistics Authority.

Source: International Monetary Fund (IMF) World Economic Outlook April 2010 database; IMF Qatar Article IV report and Statistical Appendix January/February 2010; National Development Strategy 2011–2016 estimates.

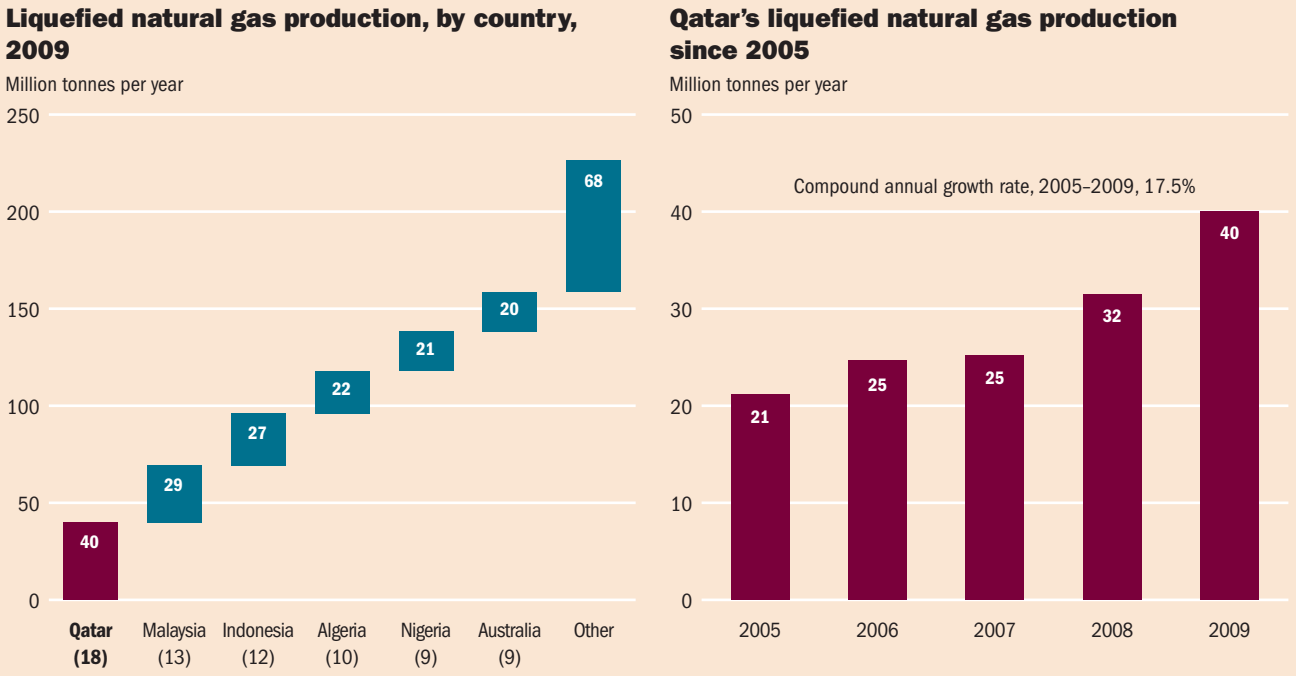
countries. Qatar's institutions have not been weakened by hydrocarbon wealth nor have they been deflected from their public purpose. While abundant hydrocarbon wealth has been associated with poor performance in some countries (the "paradox of plenty"), Qatar has wisely invested in its people and infrastructure.

Substantial investment in hydrocarbons has driven economic performance. Qatar is nearing the end of a successful 20-year investment programme in the hydrocarbon sector and is now a major player in global energy markets. Commercialization of gas resources has paid handsome dividends, and Qatar now produces and exports more liquefied natural gas than any country in the world (figure 2.2). The production capacity of liquefied natural gas in Qatar nearly doubled in 2010, reaching about 77 million tonnes.

Qatar's ascent to a global supplier has been built on a strategy of leveraging state-of-the-art technology and the expertise of international oil companies using successful joint venture arrangements. Qatar has established a reputation as a reliable and flexible partner with both co-investors and client markets. Investments along the supply chain in transportation and re-gasification facilities have paid off. Other ingredients of Qatar's successful business model include aggressive marketing and vigorous cost cutting. Qatar, now one of the lowest cost producers of liquefied natural gas, also benefits from the production of liquids, condensates and ethane.

Qatar's infrastructure spending has been unprecedented. Over 2005–2009 average spending on infrastructure for a sample of 69 countries was approximately 4.2% of GDP; it was 10% for Qatar. In U.S. dollar terms, infrastructure spending in Qatar increased 57.8% a year (figure 2.3). Qatar's spending on infrastructure in recent years has also outpaced that of other countries (such as China and India) experiencing accelerated growth.

Figure 2.2 Qatar is a global leader in liquefied natural gas production



Note: Numbers in parentheses are percentage of world total of 227 million tonnes.

Source: International Monetary Fund Qatar Article IV report and Statistical Appendix January/February 2010; Cedigaz database.

The exceptionally high saving rate—total national saving averaged approximately 60% of GDP during 2002–2009—has underwritten investments in physical and financial assets. Investments in domestic capital projects have been significant, with gross investment consistently running just over 30% of GDP. Qatar has been investing heavily not only in economic infrastructure, but also in social infrastructure and fixed industrial assets. Overseas, Qatar has invested in a variety of asset classes, including equity in private and publicly listed companies, and has directly funded a range of capital projects.

Strong fiscal position

Government fiscal surpluses have been large, with the current fiscal balance (current revenue less operating expenditures) on the budget averaging 18% of GDP during 2002–2009. The overall balance (revenue less the sum of all operating and capital expenditures) has also remained firmly in surplus, averaging about 10% of GDP over the same period. The "nonhydrocarbon fiscal balance", which excludes hydrocarbon revenues, is in deficit. Although this deficit has been shrinking, it is still large: 9.2% of GDP in 2009. The share of taxes in total government revenue has been inching up. However, these fiscal metrics do not include income that accrues to the state from the activities of the Qatar Investment Authority or its affiliates. Nor on the other side of the ledger does it include state spending outside of mainstream government or spending by state-linked commercial entities.

Government spending is tightly linked to hydrocarbon revenue. Although the budget is planned based on conservative assumptions about hydrocarbon prices, which are normally well below prevailing market prices, government spending is strongly correlated with realized oil prices and government revenues (figure 2.4). Large year-on-year increases in aggregate spending challenge the capacity of some ministries and agencies to absorb additional resources while ensuring efficiency, value for money and adequate social returns on public investment.

Figure 2.3 Qatar's spending on infrastructure over 2005–2009 has outpaced that of other countries experiencing accelerating growth

Note: Infrastructure spending based on awarded development projects in power, water and transportation with a total budget of more than US$50 million over the execution period.

Source: MEED Projects database.

Recent policy improvements

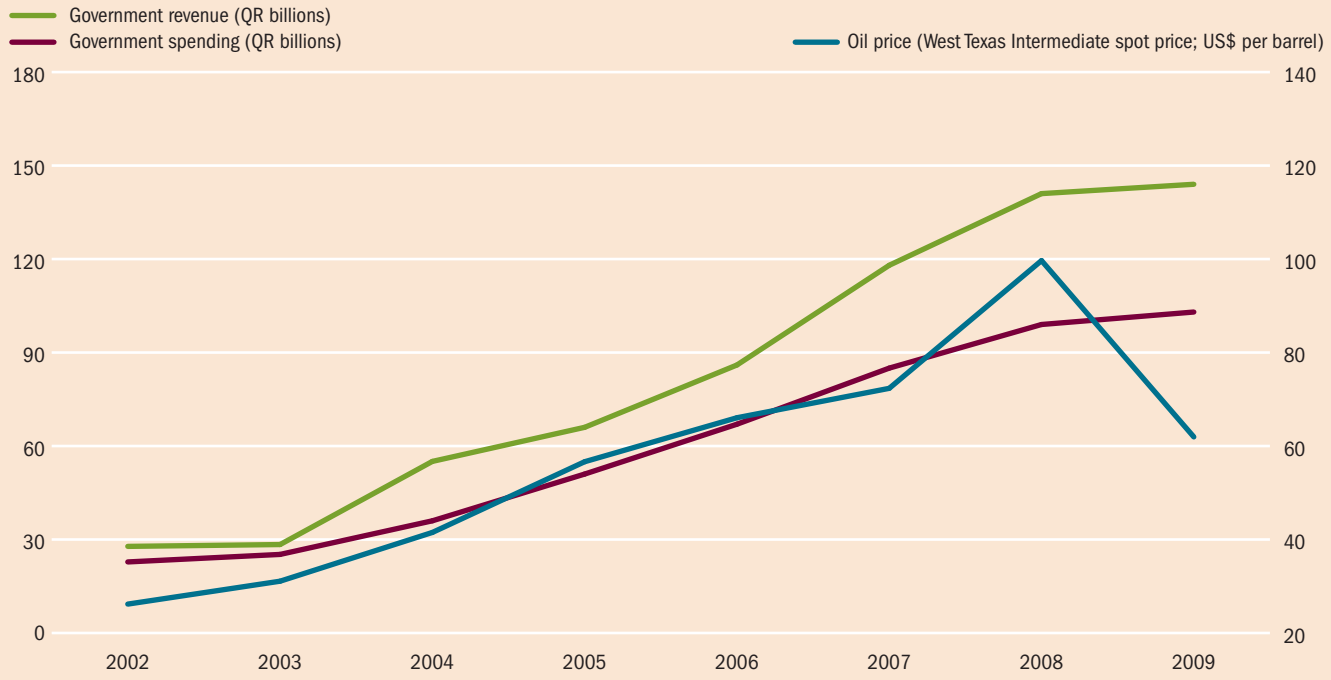
Qatar's hydrocarbon sector has long been developed through beneficial joint ventures with foreign investor partners, particularly the major international oil companies. Outside the hydrocarbon and energy complex the presence of foreign players has been more limited, but this pattern is changing.

In 2000 Qatar began to accelerate the easing of restrictions on foreign participation in the non-hydrocarbon economy. Although domestic majority ownership is still required in some sectors, 100% foreign ownership is permitted in a growing list of sectors, including industry, agriculture, health, tourism, education, energy, mining and service sectors. In addition, 100% foreign ownership is permitted in the special economic zones of the Qatar Financial Centre and the Qatar Foundation (including for tenants of the Qatar Science and Technology Park).

Partly to attract and retain foreign investment, Qatar has simplified its corporate tax regulations, with foreign investors now subject to a low flat-rate tax of 10% on their profits. Qatar's liberal capital account regulations have long permitted free remittance of profits for all investors.

Fledgling initiatives aim to bolster the private sector, and support for private sector development is building. For example, the second player

Figure 2.4 Government spending is strongly correlated with oil prices and government revenue



Source: International Monetary Fund (IMF) Qatar Article IV report and Statistical Appendix January/February 2010; IMF Qatar Medium-Term Baseline Scenario; U.S. Energy Information Agency Petroleum Statistics database.

in Qatar's telecommunications market represents a joint venture between Vodafone (51%) and the Qatar Foundation (49%). The 2006 competition law includes antitrust provisions as well as safeguards for consumers. Qatar has also drawn on independent power producer and water agreements for cogeneration of power and desalinated water. In addition, private equity has been carved out of selected state-owned companies through several initial public offerings.

In 2009 the establishment of Enterprise Qatar was announced to catalyse services that support the creation and expansion of small and medium-size enterprises. For its part, the Qatar Development Bank is expanding its activities to ensure greater relevance and more effective delivery of services to private sector clients.

Institutional advances

Promulgated in 2004, the Permanent Constitution establishes, among other things, the principles that guide the regulation of the state and its institutions. From an economic perspective the Constitution guarantees the rights to private property and economic freedom and establishes state ownership of the country's hydrocarbon wealth. Under the Constitution executive powers are vested in the Emir, assisted by the Council of Ministers. The Council of Ministers, headed by the Prime Minister, manages the financial, administrative, legal and regulatory infrastructure of the country, deciding on and implementing economic projects and delivering public services.

To meet new demands and strengthen performance, Qatar has embarked on a programme of reforms to consolidate decisions of national significance about Qatar's future within an integrated framework. At an operational level the reforms emphasize improvement in public services and delivery of value for money, thereby enhancing opportunities and conditions for the country as a whole as well as for its individual citizens. By clarifying national development priorities and

directions, these reforms aim to provide greater predictability for the private sector and civil society, leading to better alignment of interests across the country.

A significant rationalization of the functions and roles of ministries and agencies is under way, aimed at tightening policy cohesion, improving service delivery, eliminating waste and enhancing public sector accountability and performance. Implementation of these changes across the whole of government is now proceeding, with the General Secretariat of the Council of Ministers having been given the mandate for planning and monitoring performance across government. An initiative of particular importance has been expanding the role of the former Ministry of Finance to include economic policy support, advice and coordination. In recognition of this expanded mandate, in 2008 the Ministry was renamed the Ministry of Economy and Finance.

The need for budgetary reform has also been acknowledged. Establishing a comprehensive legal and regulatory framework for public finance that is consistent with the Constitution and that incorporates good technical practices is a high priority (see chapter 3). A draft organic budget law (the Public Services Financial Management Law) is being prepared.

In recognition of the need to look towards the longer run development needs of the state, the General Secretariat for Development Planning was created in 2006 and given responsibility for managing medium- and long-term development planning. It was mandated by Emiri Decisions 39 and 50 to formulate *QNV 2030* and to support implementing ministries and agencies in executing it. *QNV 2030* was completed in 2008, and now the recommendations of the current document, Qatar's first National Development Strategy, have been formulated and approved by the country's high authorities.

Other significant institutional initiatives have been realized. In 2005 the Qatar Investment Authority was established and made responsible for managing much of the country's wealth. Through investment in suitable foreign currency assets, the Qatar Investment Authority aims to build and diversify Qatar's future income. The creation of a regulator (ictQATAR) for the telecommunications sector and the entry of a second player into the market were also major developments, especially in the context of Qatar's ambitions to expand the knowledge base of its economy.

New investment areas

The trajectory of Qatar's economy is tightly linked to developments in the hydrocarbon sector. Hydrocarbons still dominate the economic landscape, but Qatar is branching out into new areas.

Cheap hydrocarbon feedstock and energy have helped prime development of downstream industries in the petrochemical and metallurgy sectors, with some subsectors, such as fertilizers, growing at a fast clip.

Footholds have also been established in new areas. Qatar Airways is taking a lead in the transport sector. Al Jazeera is now an acknowledged leader in the regional media and communications industry. And Qatari Diar is one of the biggest real estate development and investment companies in the Gulf Cooperation Council countries. The Qatar Science and Technology Park now tenants more than 30 ventures in such areas as life sciences, oil and chemicals, environment, electronics and software engineering. Qatar's financial sector has also seen rapid development serving the needs of a larger and more complex economy.

Financial sector progress

Qatar's banking sector has expanded rapidly. At end-2000 the country had 96 bank offices (headquarters and branches); by end-2009 that number had doubled, despite advances in electronic banking. Bank assets grew from QR 50 billion in 2000 to QR 484 billion in March 2010, a jump from 78% to 123% in the ratio of bank assets to GDP.

Reserve money and broad money (M2) have multiplied over the decade. Reserve money—the liabilities of Qatar Central Bank—has soared from just over QR 3 billion in 2000 to QR 50 billion in March 2010. During the same period broad money jumped from a little over QR 35 billion to just under QR 243 billion. Demand deposits have been the fastest growing component of broad money.

Credit to the private sector has taken off, becoming the fastest growing component of commercial banks' balance sheets. Private credit expanded from about 20% of GDP in 2000 to approximately 50% in 2008, but growth slowed sharply in 2009. The upward trend in the ratio of credit to the private sector, along with other indicators (see below), mirrors steady progress in capital market development.

Qatar's equity market is developing rapidly. From humble beginnings, the Qatar Exchange (formerly the Doha Stock Market) has come a long way, with market capitalization in 2009 of roughly 90% of GDP. The number of listed companies has also grown substantially to span banks, insurance companies, industry and other nonfinancial services. The market index ascended rapidly through 2005 and then declined but has been recovering recently. The Qatar Exchange is classified as a "frontier market" and aims for "emerging market" status in the near future.

The Qatar Financial Centre, having attracted many of the world's leading financial institutions to Qatar, is now taking a more focused role in promoting the development of Qatar's financial sector. In addition to providing a window on banking and investment opportunities, the centre's new strategy seeks to develop core business strengths around asset management, captive insurance and re-insurance.

Investments catching up with needs

Physical investments have fast caught up with needs. Bottlenecks in infrastructure have contributed to high project costs and inefficiencies in the past, perhaps deterring investment. High-quality and reliable infrastructure services will be important in determining the economy's overall competitiveness and opportunities for diversifying its productive base. Accommodating future expansion are completion of the new industrial area, significant investments in power generation and desalinated water production, upgrading and expansion of road networks and construction of the new Doha airport. Investments by Qatari Diar, Barwa and Doha Land will have a strong impact on Qatar's built environment and on the spatial arrangement of economic activity within the country.

Investments in healthcare have been significant, supporting workforce productivity and fostering social cohesion. Thanks to the heavy investments in high-quality health services and delivery systems, mortality rates have declined markedly, and prospects of survival at vulnerable ages have improved. A diverse complex of health facilities now meets widely divergent and often highly specialized needs, supported by more than 13,000 personnel, almost all with specialist medical and technical skills.

Recognizing gaps in the education system and in broader capabilities within the country, Qatar has invested heavily in education and training. Government education expenditure has increased steadily to about 5% of GDP in 2008, making Qatar second only to Saudi Arabia among Gulf Cooperation Council countries on this metric. Initiatives in tertiary education include expanding the Qatar Foundation Campus, reforming Qatar University, creating a new community college and introducing vocational and technical education streams.

Corporate training centres have expanded, facilitated by government-owned companies such as Qatar Petroleum, to support continued learning. These initiatives are complemented by scholarships and other incentives to encourage young people and professionals to improve their skills. And at the interface of the public and private sectors, the Qatar National Research Fund constitutes an

early initiative in Qatar's efforts to mobilize 2.8% of GDP to support research and development.

Although these new directions support *QNV 2030* and are expected to be beneficial, they are sometimes poorly integrated and aligned. In addition, some measures exist only on paper, and implementation of others lags.

While Qatar National Development Strategy 2011–2016 will leverage existing initiatives, it also provides a framework that can fill gaps and provide effective integration and alignment across sectors. Before turning to the details of that strategy in the chapters that follow, the next section presents the outlook for 2011–2016.

Outlook for 2011–2016

Qatar's economic prospects in the medium term remain favourable, though uncertainties loom. The global recovery from the recent economic and financial crisis, though uneven, is continuing, bolstered by continued robust growth in emerging markets (mainly in Asia) and a rebound in global trade. However, the rapid global growth seen in the years before the crisis is unlikely to return in the next few years. Fiscal consolidation is under way in Europe, Japan and the United States, and private demand remains guarded. Households are building savings and attempting to recover from income losses. Overall, employment prospects in Organisation for Economic Co-operation and Development countries are still shaky. Returns on investments are expected to remain low for some time, and more pronounced risk aversion can be expected. However, global growth is likely to be more broadly distributed, with large emerging market countries accounting for a greater portion of expansion.

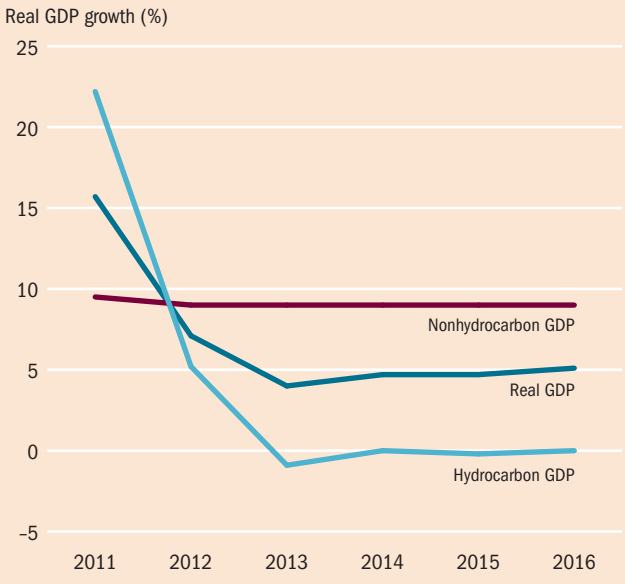
In the short to medium term Qatar will continue to make its own way. Economic development in the next few years is likely to be driven more by domestic factors than by global factors. The country's economic trajectory will be heavily influenced by investments for which funds are already earmarked and by structural reforms that authorities will begin implementing in that time. But over the longer term Qatar's prospects are enmeshed in broader global circumstances, particularly in the dynamics that drive prices for oil and gas and in the global investment outlook (box 2.1). Qatar's successful bid for the FIFA World Cup 2022 will also have significant impacts, but the main ones will be in the latter part of 2011–2016 and beyond.

A sea-change in hydrocarbon income growth

Under plausible assumptions about the future, and existing plans of Qatar Petroleum and other state-linked entities, Qatar's economy is seen registering double-digit real GDP growth in the near term. But beyond 2011 real GDP growth is likely to shift down (figure 2.5) as the current programme of investment in hydrocarbons reaches completion, and output plateaus. The boost to activity generated by FIFA World Cup 2022 preparations is expected to be concentrated in the period after 2016, though modest effects could be felt earlier.

This sea-change in the country's growth dynamics is programmed in the moratorium that limits

Figure 2.5 Beyond 2011 real GDP growth is likely to shift down



Source: Box 2.1.

Box 2.1 Glimpsing the economy's future

A statistical summary of Qatar's economy has been constructed for 2009, the latest year for which complete data are available (as of early 2011). This summary aligns and reconciles major economic accounts to create a reference point from which possible future changes can be measured. However, this snapshot of the economy may not be completely representative for other years. In 2009 Qatar's economy experienced a sharp slowdown in nominal income growth, which disproportionately affected some sectors, such as construction and manufacturing. To get a glimpse of what the economy might look like in future years, the baseline data for 2009 are extrapolated using scenarios to (numerically) describe the possible evolution of externally relevant drivers (such as oil and gas prices) and internal forces (such as government spending).

Medium-term baseline scenario, 2011–2016

Indicator	2011	2012	2013	2014	2015	2016	Arithmetic average, 2011–2016
National income and prices							
Real GDP (% growth, 2009 prices)	15.7	7.1	4.0	4.7	4.7	5.1	6.9
Hydrocarbon GDP	22.2	5.2	–0.9	0.0	–0.2	0.0	4.4
Nonhydrocarbon GDP	9.5	9.0	9.0	9.0	9.0	9.0	9.1
Real GDP per capita (% growth)	13.8	5.4	2.4	3.1	3.3	3.8	5.3
Total GDP deflator (% growth, period average)	3.9	4.2	3.5	2.3	2.9	–2.9	2.3
Nominal GDP at market prices (QR billions)	547	611	657	704	759	775	676
Nominal GDP (% growth)	20.2	11.6	7.6	7.1	7.8	2.0	9.4
Population (millions)	1.73	1.76	1.78	1.81	1.84	1.86	2.1[a]
Consolidated government operations (% of GDP)							
Total revenue and grants	38.8	36.8	36.1	33.3	32.5	33.5	35.2
Hydrocarbon revenue	26.1	24.7	23.4	21.0	19.7	19.2	22.4
Crude oil revenue	12.2	11.0	10.3	9.8	9.3	9.5	10.3
Liquefied natural gas revenue	7.4	7.4	7.0	6.5	6.0	5.9	6.7
Investment income	6.5	6.4	6.1	4.7	4.5	3.8	5.3
Nonhydrocarbon revenue	10.1	9.4	9.9	9.3	9.7	10.8	9.9
Tax revenue	4.7	3.9	4.1	4.1	4.2	4.6	4.3
Total expenditure and net lending	26.9	26.0	25.4	26.2	26.4	27.9	26.4
Current expenditure	16.8	15.7	15.5	15.6	15.8	16.8	16.0
Capital expenditure and net lending	10.1	10.3	9.9	10.5	10.5	11.2	10.4
Overall deficit (–) or surplus (+)	12.1	11.0	10.8	7.3	6.3	5.7	8.9
Nonhydrocarbon balance	–14.0	–13.8	–12.5	–13.8	–13.4	–13.5	–14.0
Growth in broad money supply (%)	**20.2**	**11.6**	**7.6**	**7.1**	**7.8**	**2.0**	**9.4**
Investment and saving (% of GDP)							
Investment	27.2	24.8	23.2	23.2	23.0	26.7	24.7
Public fixed investment	10.1	10.3	9.9	10.5	10.5	11.2	10.4
Private fixed investment	17.2	14.5	13.4	12.6	12.5	15.6	14.3
Hydrocarbon fixed investment	7.0	4.1	2.3	0.9	0.8	0.8	2.6
Nonhydrocarbon fixed investment	10.2	10.4	11.1	11.7	11.7	14.8	11.6
Gross domestic saving	59.2	54.7	49.4	46.9	43.6	45.4	49.9
Total saving	27.2	24.8	23.2	23.2	23.0	26.7	24.7
Foreign saving	–24.1	–24.0	–21.1	–19.2	–16.7	–15.2	–20.1
Gross national saving	51.3	48.8	44.3	42.4	39.8	41.9	44.8

Box 2.1 Glimpsing the economy's future *(continued)*

Indicator	2011	2012	2013	2014	2015	2016	Arithmetic average, 2011–2016
Public	22.0	21.1	20.6	17.6	16.7	16.7	19.1
Private	29.3	27.7	23.7	24.8	23.1	25.2	25.6
External sector							
Current account balance (% of GDP)	24.1	24.0	21.1	19.2	16.7	15.2	20.1
Exports of goods and services (US$ billions)	89.4	96.6	96.9	98.4	98.5	100.0	96.6
Hydrocarbon exports (oil and gas)	78.9	84.5	83.6	84.0	83.2	83.7	83.0
Exports of goods and services (% of GDP)	59.5	57.6	53.6	50.9	47.2	47.0	52.6
Imports of goods and services (US$ billions)	41.3	46.4	49.6	52.5	55.6	60.3	51.0
Hydrocarbon imports	12.1	9.6	7.9	6.5	6.5	6.6	8.2
Imports of goods and services (% of GDP)	27.5	27.6	27.5	27.1	26.6	28.3	27.5
Gross international reserves (US$ billions)	20.4	24.2	25.9	27.5	29.1	31.5	26.4
Equivalent months of imports	5.5	5.8	5.8	5.8	5.8	5.8	5.8
External debt (% of GDP)							
Total external debt	62.3	69.4	77.8	82.7	84.6	91.3	78.0
Public external debt	9.9	9.0	8.5	8.5	8.3	8.7	8.8
Total external debt service	1.8	1.9	2.1	3.2	4.3	5.5	3.1
Memorandum items							
Exchange rate (QR per US$, average)	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Crude oil price[b] (US$ per barrel)	79.8	83.3	85.9	87.1	88.9	90.7	86.0
Natural gas, Japanese price[c] (US$ per millions of British thermal units)	9.8	9.6	9.6	9.5	9.5	9.6	9.6

a. Compound annual growth over 2011–2016, based on end-2010 population of 1.64 million.

b. IMF forecasts as of November 2010; other agencies may have different figures.

c. World Bank forecasts as of November 2010; other agencies may have different figures.

Note: Totals may not sum exactly from components due to rounding.

Source: National Development Strategy 2011–2016 estimates.

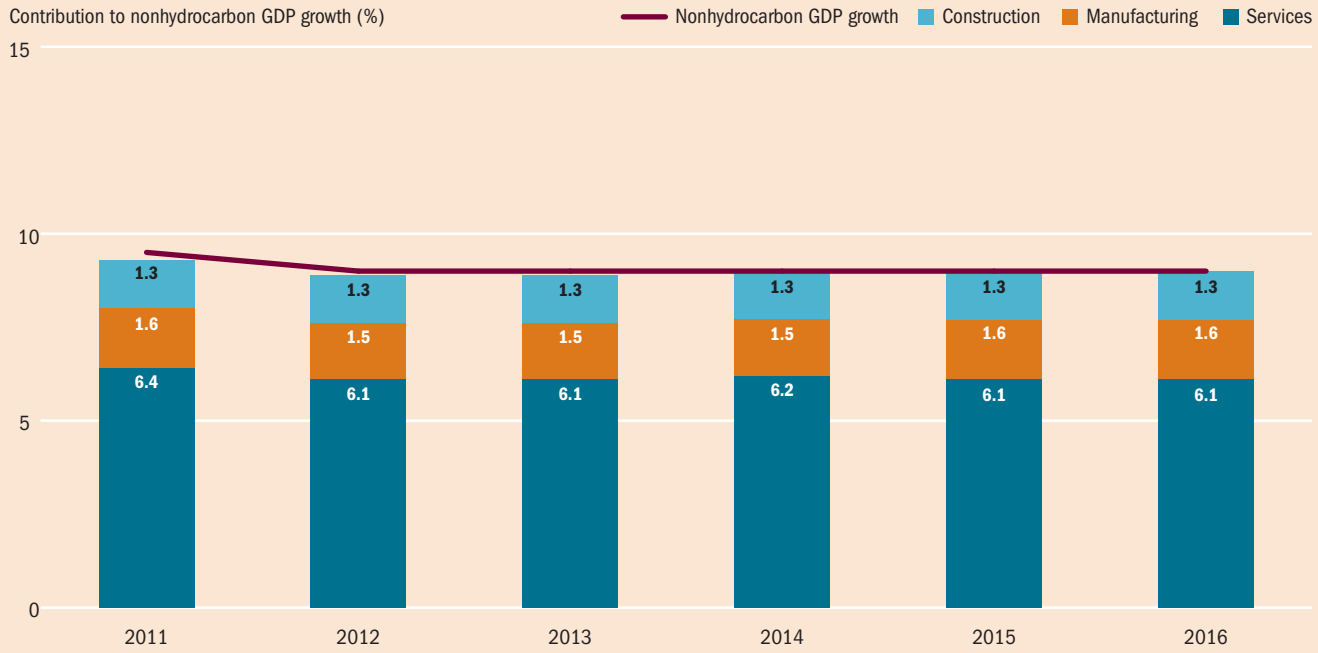
further gas production from the North Field until at least 2015 and possibly beyond. When gas production hits full capacity, growth of gas sector output will reach 39% in 2011 but will flatten as 2013 approaches. Declines in crude oil production could be expected during this period, though efforts are under way to stem them.

Although the slowing of aggregate *growth* is sharp, this is not a reversal of fortunes, as income *levels* will remain high. Healthy growth of the nonhydrocarbon sector is also expected and will help keep overall GDP growth buoyant (figure 2.6). Growth of nonhydrocarbon output is expected to average 9.1% during 2011–2016.

Services are seen as a major driver. Transportation and communications, as well as business and financial services, may grow vigorously over the period. World Cup–related activity may provide new opportunities in tourism and other areas. Completion of the new Doha airport is expected to provide a more vibrant air transport hub in the country. Amendments to the foreign direct investment law enacted in early 2010, allowing 100% foreign ownership in service-related sectors (such as business consulting, technical services, information technology, culture, sports, leisure services and distribution services) may also contribute to growth in services. By 2016 the service sector could account for 40% of total output, up from 36% in 2009 (figure 2.7).

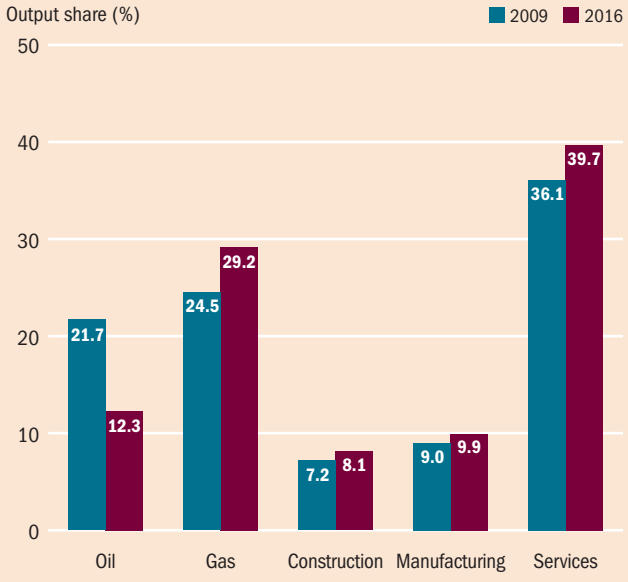
Growth in construction is expected to keep pace with the broader economy. In the early part of the period, large investment spending, particularly on megaprojects, will support construction sector growth. Construction may account for about 8% of total output by 2016, up from 7% in 2009.

Figure 2.6 With hydrocarbon growth decelerating, robust expansion elsewhere in the economy will help keep overall GDP growth buoyant



Source: National Development Strategy 2011–2016 estimates.

Figure 2.7 By 2016 the service sector may account for nearly 40% of total output, up from 36% in 2009



Source: National Development Strategy 2011–2016 estimates.

Manufacturing growth is forecast to accelerate. Although manufacturing has posted modest growth in recent years, continued expansion in such industries as fertilizers, petrochemicals and metallurgy are expected to boost performance. Forthcoming policy initiatives focusing on enterprise creation, export promotion and innovation in science and technology are also expected to deliver payoffs in the years ahead and to support a rise in the share of manufacturing output.

The share of hydrocarbons in total output may decline to about 42% by 2016, from 46% in 2009. Though gas may expand its share, this is unlikely to offset the declining share for oil in aggregate output.

Although this baseline scenario anticipates rapid growth outside hydrocarbons and a declining hydrocarbon share, the overall level of economic concentration remains pronounced. In 2016 Qatar will still be heavily dependent on hydrocarbon activity and income.

Population

Further, but modest, increases in population are anticipated. In the baseline scenario the total population of Qatar grows steadily at an annual average of about 2.1% during 2011–2016, with the total population rising from just over 1.64 million at the end of 2010 to just under 1.9 million in 2016 (figure 2.8). The rapid population growth of the recent past is not expected to be sustained. This assumption aligns with the conjectures on output growth (see above) but sees some advances in productivity, reducing employment per unit of output. At the same time, the assumed structural shift to higher valued economic activity presupposes steady advances in the skill level of the labour force and further capital deepening.

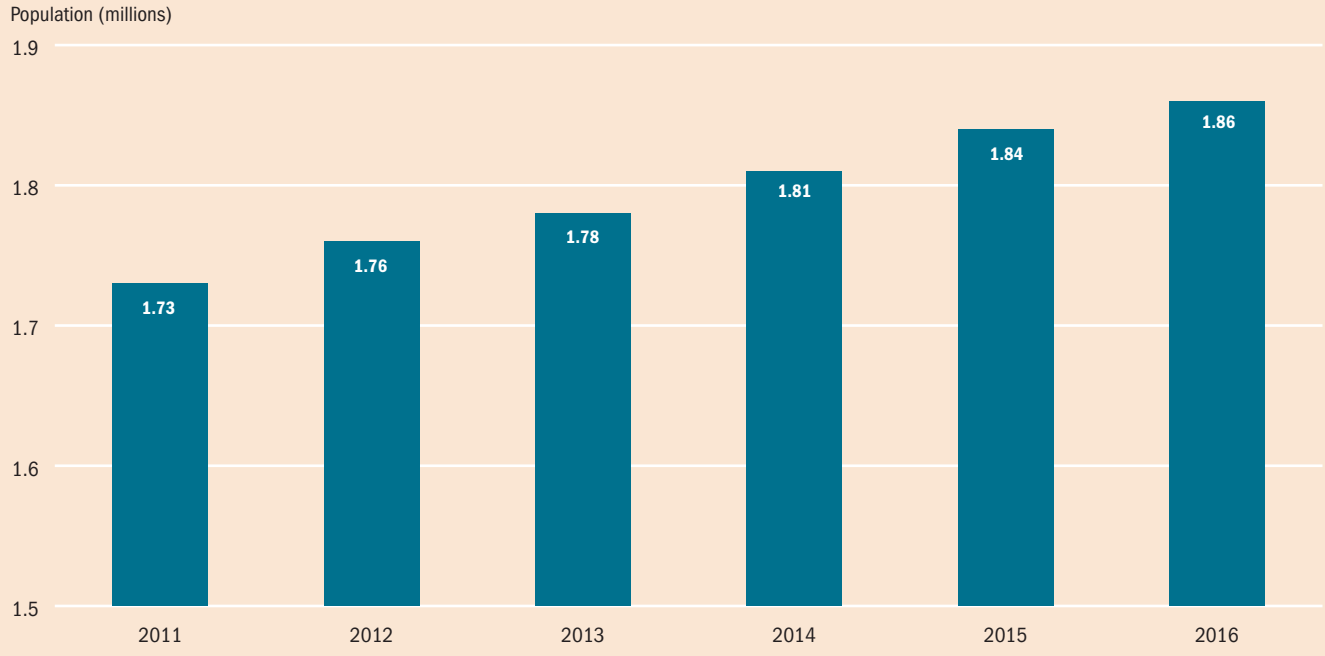
A shift in the demographic structure is expected to accompany the projected move towards higher productivity activity. There will likely be an increase in the share of high-skilled, high-paid immigrants in the labour force, with a larger number of dependent children and spouses. The extent and speed of these changes will depend on policies governing immigration and operation of the labour market. Policies that accelerate the shift towards high value-added, capital- and knowledge-intensive activities suggest a trajectory in which total population might be in the range of 2.2–2.8 million by 2030. But a persistence of low wages in the private sector would entrench the bias towards labour-intensive technologies and push in the direction of a larger but less skilled population. The timing and scale of activities related to the FIFA World Cup 2022 preparations add to the uncertainty.

Investment

On the expenditure side, the baseline scenario assumes that domestic demand will remain buoyant, fuelled by household spending and strong domestic investment. Robust private demand is likely to be sustained by higher income and the modest population increase.

The investment pattern will reflect the decline in hydrocarbon capital spending. During 2011–2016

Figure 2.8 Qatar's population is expected to grow steadily, at an annual average of about 2.1% during 2011–2016



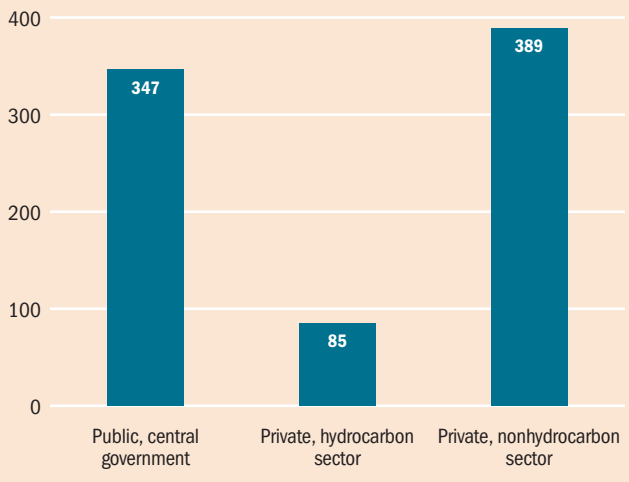
Source: Box 2.1.

total real gross domestic investment might reach almost QR 820 billion (figure 2.9), with perhaps half that coming from the nonhydrocarbon sector. Central government investment is estimated at QR 347 billion.

Private investment outside hydrocarbons is seen taking the helm in driving growth. The baseline scenario anticipates that nonhydrocarbon investment is driven by spending from largely government-linked Q-companies, such as Barwa, Qatar Diar, Qatar National Bank and Qatalum. With steady growth, the ratio of nonhydrocarbon private investment to total GDP could reach 15% by 2016, nearly double its share in 2009.

On current plans, public infrastructure spending will peak in 2012, though the profile of the spending pipeline will change if large new investments related to the FIFA World Cup 2022 and other initiatives are approved and commissioned prior to 2016. In the baseline, estimated real growth of public investment may well peak in 2011–2012, settling to an average annual growth of about 5% thereafter.

Figure 2.9 During 2011–2016 total gross domestic investment might approach QR 820 billion



Note: Investment in the nonhydrocarbon sector includes investment of state-linked and -invested companies and private investment.
Source: National Development Strategy 2011–2016 estimates.

National saving and fiscal balances

National saving will remain high. The ratio of gross national saving to total GDP would, under the baseline assumptions, remain above 40% through 2014 but might edge down in the later years (figure 2.10). As a share of nominal GDP, government saving (current revenue less expenditure) is expected to trend down.

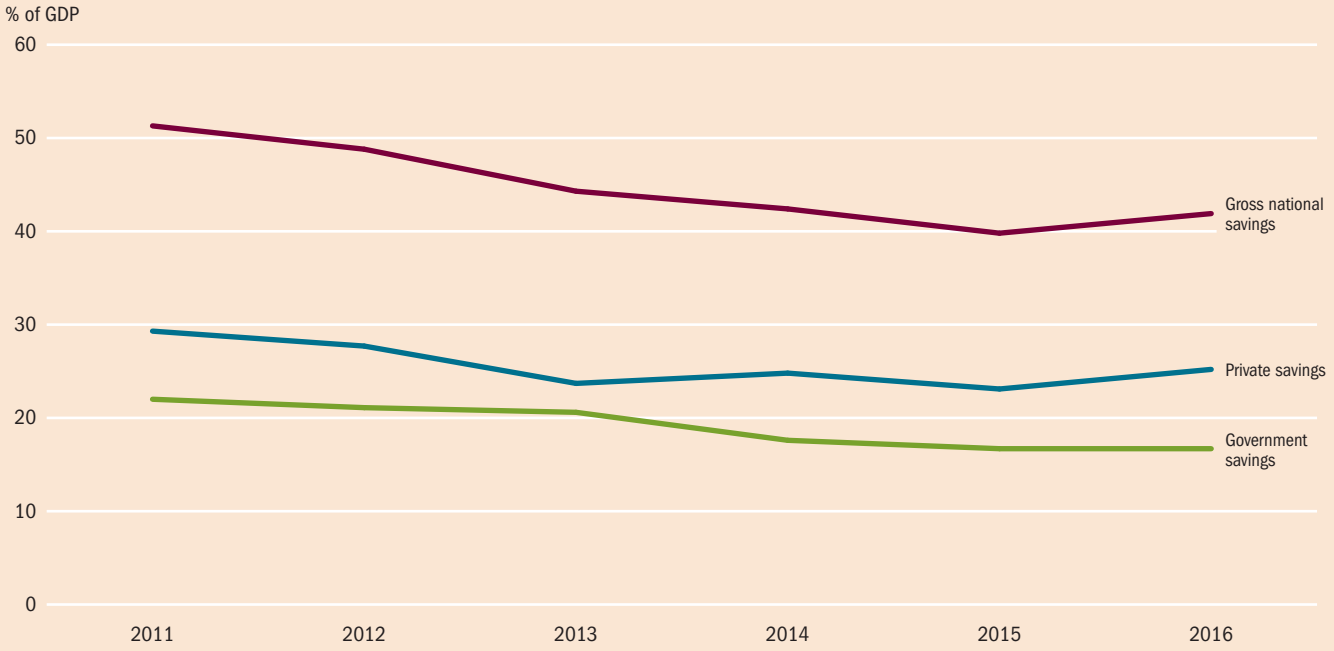
The baseline suggests that the overall government fiscal position (total revenue less current and capital spending) remains healthy, with a surplus of 5.7% of GDP by 2016, but tighter than before (figure 2.11). The decline in the surplus reflects slower growth in nontax revenue than in major current and capital expenditure components. The government's share of revenue streams of both oil (where the take is large) and gas (where the current take is more modest) is assumed to remain stable. If these shares were to rise, the surplus might remain in double digits throughout.

Current account balance

Aggregate export growth will fall with slowing growth in hydrocarbon export volumes. Baseline hydrocarbon export revenue projections assume an average oil price of $86 per barrel during the period (IMF November 2010 forecast) and an average (cif) price for liquefied natural gas of $9.60 per million British thermal units (figure 2.12). Overall growth of exports of goods and services would, in the baseline scenario, slow sharply from 2012 to an average of about 1% through to 2016. Nonhydrocarbon exports are expected to show strong gains. With the projected decline in capital spending in the hydrocarbon sector, hydrocarbon-related imports are estimated to contract for most of the period. Nonhydrocarbon imports will keep pace with the overall growth of the nonhydrocarbon economy.

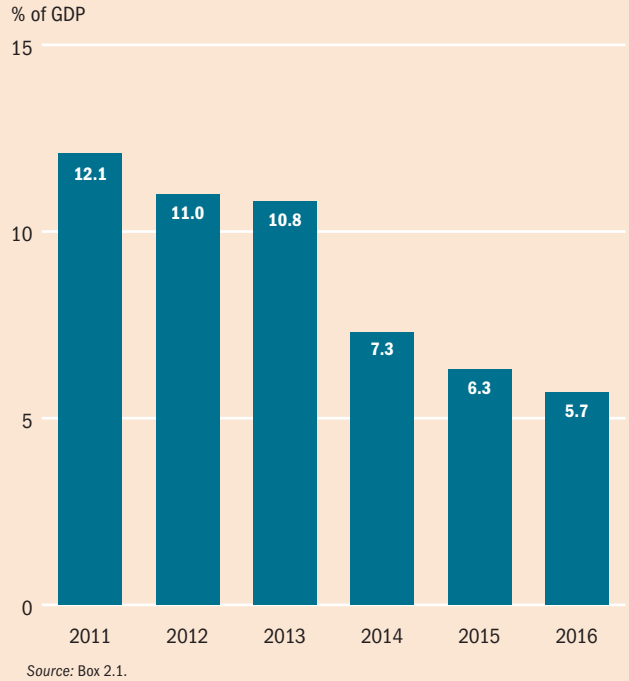
With a declining trade surplus, net factor income (supported by income receipts generated from investment in foreign assets) helps maintain a healthy current account balance. In the baseline

Figure 2.10 The ratios of gross national saving to total GDP and government saving to GDP are expected to decline but remain substantial



Source: Box 2.1.

Figure 2.11 The overall government fiscal position is expected to remain healthy, with a surplus of 5.7% of GDP by 2016



Source: Box 2.1.

the current account balance may peak at about 24% of GDP in 2011–2012, and although possibly declining in the later years, it could still be as high as 15% of GDP in 2016 (figure 2.13).

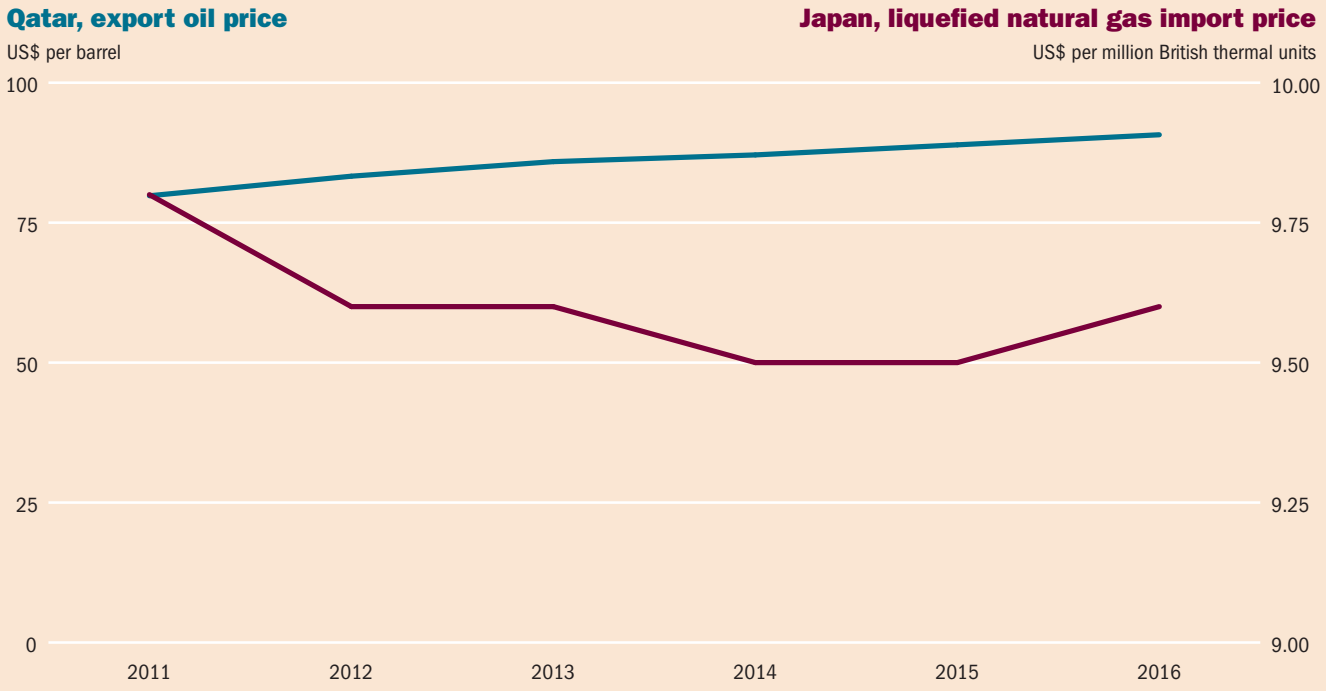
Hydrocarbon swing factors

It is important to understand, especially for policy planning, the boundaries within which economic outcomes could occur given changes in the framework's key assumptions. The baseline underlying the preceding discussion works within one set of assumptions. But several swing factors could materially shift the baseline trajectory. Two scenarios are of particular relevance: lower oil prices and lower gas prices.

Oil at $74 a barrel?

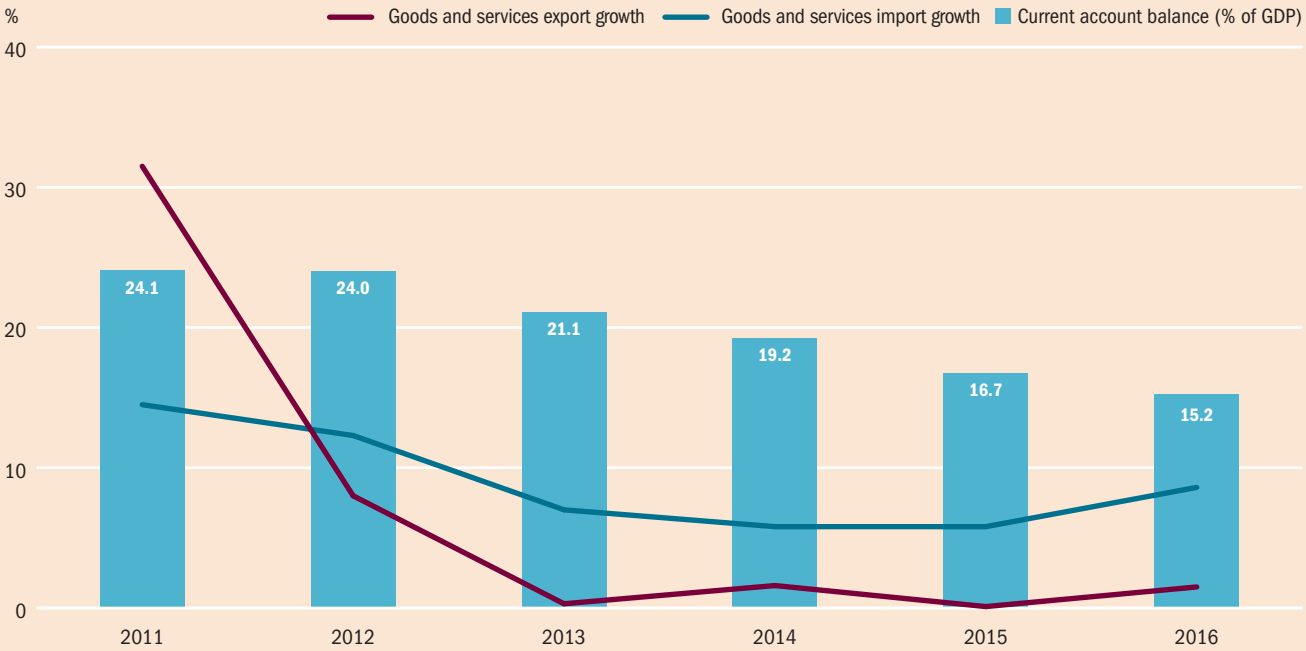
For a hydrocarbon-based economy like Qatar, a future of low oil prices (at least in the medium term) would have a considerable impact on the financial resources available, with implications for

Figure 2.12 Oil prices are projected to rise, gas prices to remain range bound



Source: International Monetary Fund (IMF) Qatar Article IV report and Statistical Appendix January/February 2010; IMF Qatar Medium-Term Baseline Scenario; World Bank Commodity Prices database.

Figure 2.13 The current account surplus should remain sizeable, peaking at 24% of GDP in 2011, declining to 15% by 2016



Source: National Development Strategy 2011–2016 estimates.

sustainable growth paths. As mentioned above, while the global recovery has gained traction in the last few quarters, medium-term global growth prospects remain fraught with downside risks. And with the trend in commodity markets tightly linked to global demand, a renewed softening of commodity prices from the peaks reached in early 2011 cannot be ruled out.

This alternative scenario assumes that oil prices fall 14% relative to their average baseline price of $86 per barrel. Average crude oil prices have been on an uptrend since early 2009, after a sharp decline in the last quarter of 2008 following the crisis. Having peaked at over $90 per barrel in April 2010, oil prices have since stayed mainly in the $70–$80 range, with drifts above $90 in late 2010 and towards $100 in early 2011.

A view that average crude oil prices during 2011–2016 will remain at around $74 per barrel alters the baseline results. This lower oil price scenario results in both less aggregate income and a slower growth trajectory relative to the baseline. In this scenario gas prices are held at their baseline values, even though Qatar's liquefied natural gas price basket is likely to be linked to benchmark crude prices. This treatment will tend to dampen estimated impacts.

Applying the lower oil price assumptions suggests that the average nominal GDP level (nominal GDP better captures the impacts of oil price changes on domestic income than do traditional volume measures of GDP for Qatar) would shrink 2% relative to its baseline level by 2016. Nominal GDP growth under the lower oil price assumption would track slightly lower, at about half a percentage point below the baseline. These small impacts on growth are felt more or less evenly throughout the period.

Impacts on the budget would be pronounced. The government budget's take of total oil revenue has historically been high, and much higher than for liquefied natural gas. Lowering oil prices and oil revenue, therefore, has significant knock-on effects on government revenue and saving. With expenditure more or less tracking as in the baseline, the overall fiscal balance narrows. By 2016 the assumption of lower oil prices cuts the overall fiscal balance from almost 6% of GDP to 4%. To the extent that government diversifies its income over the period, adverse fiscal impacts would be dampened.

More pessimistic assumptions about the future of oil prices—but certainly not outside the bounds of recent experience, when prices dipped to $34 in the summer of 2009—could move the overall fiscal balance into deficit, holding spending trajectories constant. Accurately forecasting oil prices is laden with difficulty, and plausible future prices could fall within an extremely large range. Naturally, if prices climbed substantially above the baseline assumption, this would expand fiscal space.

Gas prices down 30%?

Benchmark oil and spot gas prices used to trend together, but no longer. Oil and gas prices have historically tended to follow each other quite closely, with relative prices not drifting too far from their energy equivalent ratios, as measured in U.S. dollars per barrel for oil and in U.S. dollars per million British thermal units for gas. Periodically, significant global demand shocks, hurricanes, and unseasonal weather have driven a wedge between the prices, but there has been a tendency for the price ratio to revert. While some uncoupling was evident after mid-2006, it became particularly pronounced in 2009 and 2010. Spot gas prices plummeted with oil prices in early 2009, but when oil prices recovered, gas prices continued to sag. Prior to 2006 the ratio of oil to gas prices had averaged about 7.5, giving oil a slight price premium over gas (based on the energy equivalent ratio of 6.9). By the end of April 2010 the ratio had climbed to 22.1, giving oil a significant price premium.

The dynamics underlying the evolution of the link between spot gas and benchmark oil prices are not easy to predict. Uncoupling appears to have occurred for three main reasons. First, gas and oil are competing less in the same end-use markets and so are not close substitutes—oil's major use is in transportation, and natural gas is

used mainly for power production, where it competes with cheap and sometimes subsidized coal. Second, there have been significant new discoveries of "unconventional gas" (mainly shale gas), which have boosted supply, particularly in the United States. The initial impact of added supply was confined to the U.S. spot market, but as surpluses found their way to Europe, spot prices have dropped there too. Third, the global recession appears to have had a differential impact on demand for oil and gas. Pundits are divided on the longer term future of the link, but few seem to expect any reversion to historical price parities soon.

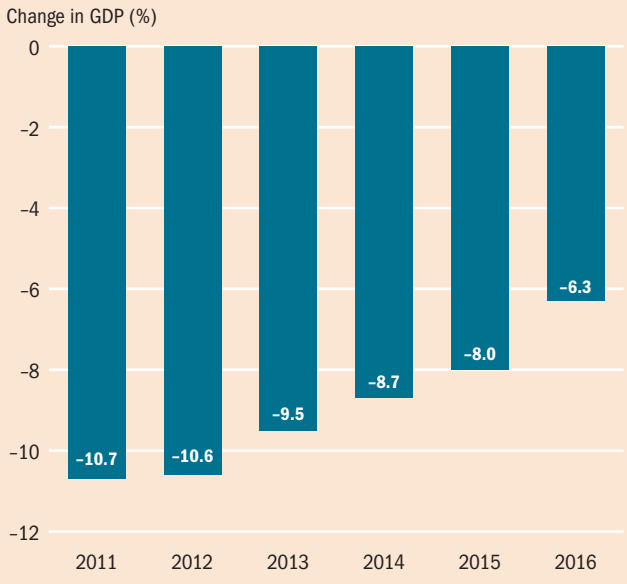
Looking ahead, the International Energy Agency expects global demand for gas to broadly maintain its share in total energy demand through 2030. The penetration of gas in some large markets, such as China, is still at low levels. And Qatar is particularly well positioned to take advantage of emerging opportunities as its investments along the supply chain and its extremely competitive production costs continue to give it the flexibility to compete in markets globally. But there are also uncertainties. On the demand side, opportunities for gas to displace fuel oil in power generation have just about been exhausted and, in the absence of a carbon tax or an end to subsidies for coal, coal could remain a cheaper and favoured source of fuel for power generation in China and India. On the supply side, large additions to liquefied natural gas supply, particularly from Australia, are coming onto the market and could toughen conditions for Qatar, particularly in the Pacific basin market.

This scenario assumes a 30% fall in the baseline gas price after 2010, bringing the gas price to an average of $6.9 per million British thermal units, which in energy terms is broadly equivalent to $48 for a barrel of crude oil.

Negative income and fiscal impacts follow. Because the share of liquefied natural gas in total output will rise over the period, the impact of falling prices on income is large. The assumed 30% fall in the price of Qatar's liquefied natural gas basket reduces nominal GDP in each year (figure 2.14). Cumulative income losses over the period are QR 357 billion, a 9% reduction from the baseline level of cumulative GDP. This is a large effect, especially given that actual falls in U.S. (Henry Hub) and European (Balancing Point) spot markets have been well in excess of the 30% drop assumed here.

Fiscal saving impacts are also heavy. Government saving, under these assumptions of lower gas prices and steady expenditure, could be reduced to 3.4% of GDP by 2016. This is almost 2 percentage points lower than the baseline, despite a modest fiscal take from gas. Because the fiscal take from liquefied natural gas revenue has been historically modest and is assumed to remain so in this scenario, this dampens the reverberations on the government's budget. Raising the fiscal take from gas would generate larger surpluses in the future, but it would also make fiscal balances more responsive to gas price movements.

Figure 2.14 An assumed 30% fall in the prices of Qatar's liquefied natural gas basket reduces nominal GDP



Source: National Development Strategy 2011–2016 estimates.

FIFA World Cup 2022 and higher government investment spending?

Hosting the FIFA World Cup in 2022 presents Qatar with new opportunities. Over the early part of 2011–2016 the economic impacts of the World Cup are likely to be modest, but Qatar must prepare for sizeable infrastructure investments to follow. These investments will be significant relative to the size of the economy, and their macroeconomic and longer term development impacts warrant close attention. Well beyond 2022, the World Cup may present opportunities to strengthen the structure and performance of Qatar's nonenergy sectors.

In the immediate future (2011–2012) the World Cup could affect trading and speculative investment activity. The impacts would likely be temporary, and the government will monitor them to prevent abuse of market power and protect the broader public interest.

From the perspective of the country's economic diversification ambitions, the World Cup presents new opportunities for Qatar. Public-private partnerships may benefit some projects and should be considered within wider public investment decision processes. On the business front the World Cup will create opportunities for domestic enterprises to form strategic alliances externally and to connect to global value chains. The World Cup will also accentuate some challenges. Qatar should leverage the World Cup to close gaps in its capabilities. For example, investment agreements could include mechanisms that secure knowledge and technology transfer.

As mentioned, though some World Cup–related investment projects may be commissioned during 2011–2016, the added impact of World Cup activity during this period is likely to be modest. A sizeable pipeline of investments is already in place. In general, the macro-fiscal framework suggests that additional investment spending (whether public or private) is likely to have only a moderate short-run demand impact on local output and income.

After 2012, when the current expansionary phase of hydrocarbon development ends, the macro-fiscal framework suggests that the structure of Qatar's economy will be such that 5 percentage points of additional public sector investment spending would be needed to generate a 0.5 percentage point temporary acceleration of growth in nonhydrocarbon output. The domestic income generated by added capital spending is diluted both because a high proportion of the spending is likely to be on imports (capital goods and materials as well as consumption) and because a large share of wage income earned by expatriate workers is likely to be remitted rather than spent locally. The fiscal impacts of higher public investment spending could be significant because it is unlikely to generate much of a tax offset. There is also a risk of inflationary pressures if the phasing of large-scale projects creates or aggravates supply bottlenecks.

During the period covered by the National Development Strategy 2011–2016, preparations for the World Cup will gather momentum. Institutional arrangements for overseeing and managing World Cup–related activities will be established, and the pipeline of investments to deliver needed infrastructure services will be prepared. From a planning perspective the World Cup is best considered within the broader framework of national development and not as a one-off event. Integrating planning and funding arrangements within broader frameworks for the overall fiscal and budgetary management of the economy will be important. A beneficial legacy will require scrutiny of large World Cup–related capital projects for their long-term socioeconomic and environmental impacts.

Supporting the National Development Strategy 2011–2016

As this chapter shows, Qatar's economic prospects remain favourable under plausible assumptions. In 2011 the economy should register double-digit growth, but after that real growth is likely to shift down. The growth of hydrocarbon income will slow, but robust expansion elsewhere in the economy

should keep overall GDP growth buoyant, with services as a major driver and manufacturing edging up. The government's fiscal position is expected to remain strong and will be adequate to support the programmes of the National Development Strategy 2011–2016. Gross national savings are likely to remain above 40% of GDP through 2014 but might edge down in the later years. The overall fiscal balance would narrow from current highs to just below 6% of GDP by 2016, still very healthy.

Presenting larger challenges are the constraints on human and institutional resources, a recurrent theme in the chapters that follow. Qataris, with a labour force participation rate of around 50%, constitute only 6% of the labour force, heavily concentrated in the government and state-linked companies (95%). Efforts that equip Qataris with the skills required to attain their maximum potential in both the public and private sectors warrant close attention, and their success will be vital to creating a vibrant nonhydrocarbon economy and broader societal capabilities.

Qatar also needs strong public sector institutions to achieve the goals of *QNV 2030* for social progress, human development, a sound and diversified economy and a sustainable environment. That will require institutional and organizational capacity building, efficient and transparent delivery of public services, fruitful public-private cooperation and partnerships, a vibrant climate for business and a larger space for civil society. Credible, client-focused and capable institutions that deliver timely and accountable services to citizens and respond to their concerns are the keys to improvement.

In policy and planning, public sector institutions need to become more forward-looking and focus on outputs and results rather than inputs. This will require linking the national budget up to national goals and down to the output-based operational planning in line ministries and agencies. Institutions need to move beyond a silo mentality, with little accountability for outcomes, to active cross-institutional collaboration. In human resources management the lack of performance standards and management systems needs to be remedied by developing career paths tied to performance. And institutional processes, centred on departments and implemented manually, need to be streamlined and customer driven through one-stop windows enhanced by integrated information systems.

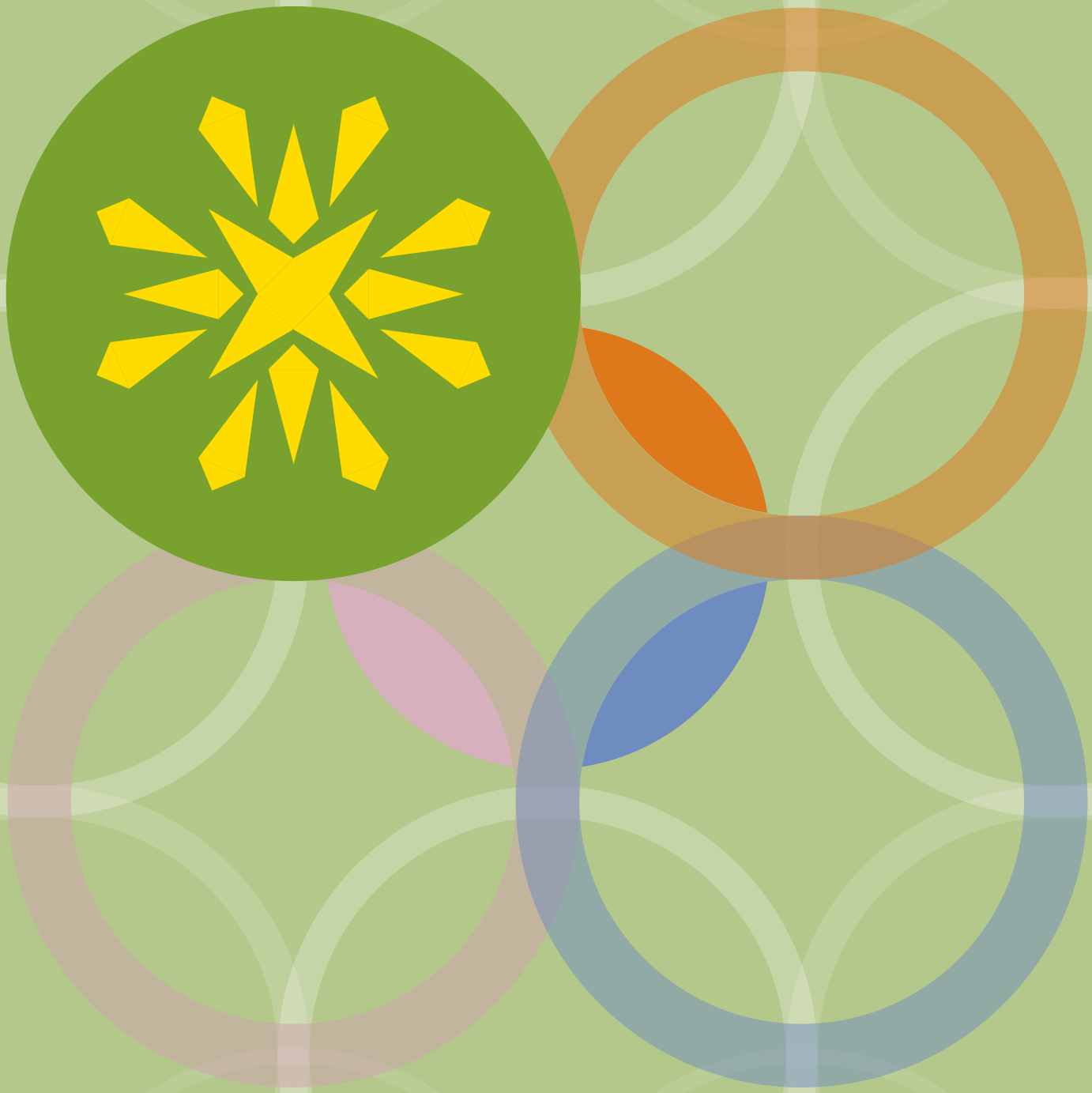
These themes and issues are taken up in the chapters that follow. In chapter 3 attention turns first to the challenge of creating the conditions that can support the achievement of sustainable prosperity.

Part 2

The four development pillars

Chapter 3

Sustaining economic prosperity



3 Sustaining economic prosperity

"Sustaining prosperity over the long term requires wise management of exhaustible resources to ensure that future generations inherit ample means to meet their aspirations."—*Qatar National Vision 2030*

Qatar National Vision 2030 (QNV 2030) articulates three interrelated goals for the economy. It looks to sustain a high standard of living, to expand innovation and entrepreneurial capabilities and to align economic outcomes with economic and financial stability.

QNV 2030 defines sustainability as meeting the needs of the current generation without compromising those of future generations. There are many paths to sustainability; the goal of prosperity clarifies the development path the country wants to pursue and the ones it wants to avoid. While this broad perspective does not specify a particular set of operational rules, it provides clear direction for the economy.

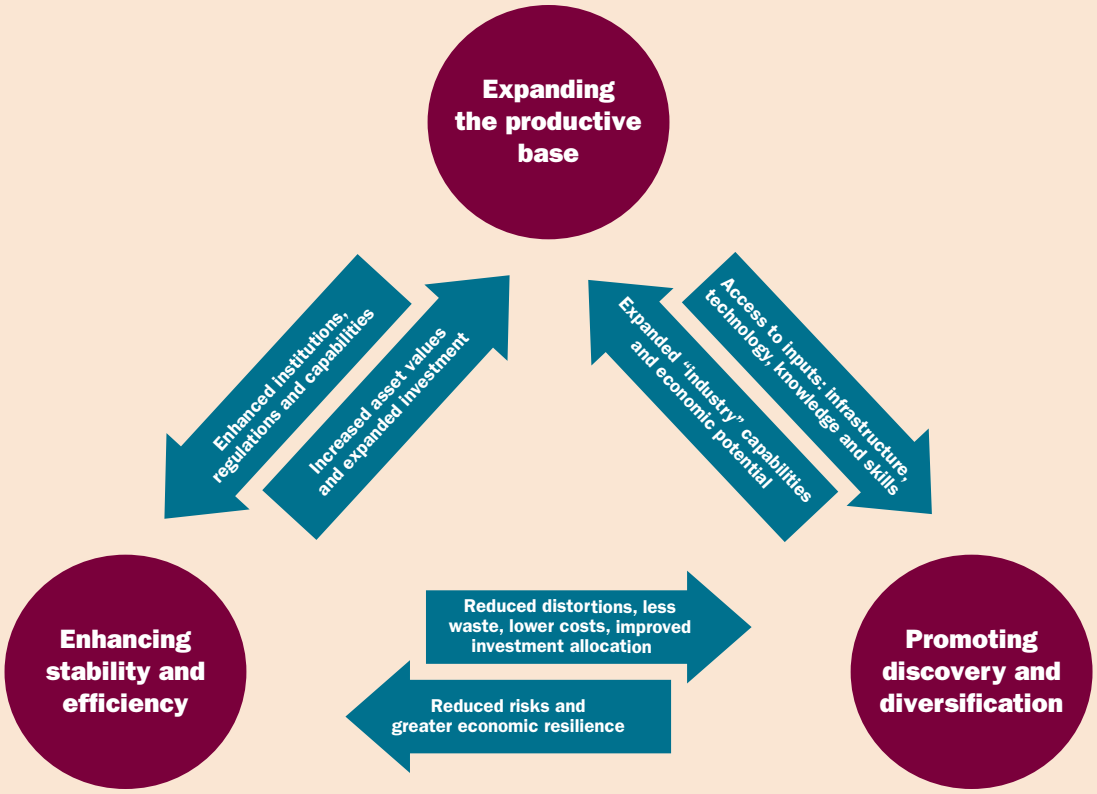
To embed sustainability in Qatar's economy, progress is needed in three parallel, mutually reinforcing directions (figure 3.1). First, the country will enlarge the value of the productive base, which is necessary to sustain prosperity in an economy with a growing population and to expand the potential for future generations. Second, the government will guard against economic instability and promote increased efficiency. Third, the government will work in partnership with the private sector to diversify the economy and foster a culture of discovery and innovation.

The "productive base" is the value of all the country's resources: its man-made capital (plants and buildings, machinery and infrastructure), human capital, natural resources, technology and institutions (defined broadly to include markets, systems, rules, organizations and social capital). When the value of the productive base grows, there are more opportunities for the average citizen, and when it shrinks, there are fewer. To be sustainable, an economy with a growing population must have an expanding productive base. Sustainability also requires that depletion of any component of the productive base be compensated by investments of at least equal value in its other components.

The pace at which the value of the productive base expands depends on how stability and efficiency influence the volume of investment and the returns to that investment and on how economic discovery and diversification expand opportunities. Links run in the other direction, too, with the capabilities embedded in institutions and people (which are vital parts of the productive base) determining the economy's ability to navigate a stable path, allocate resources efficiently and diversify into new activities.

Mutually reinforcing relationships also exist between economic structure and economic efficiency and stability. In particular, the underlying structure of economic activity influences the economy's vulnerability to shocks at an aggregate level, with more diversified economies being less prone to risks and displaying less volatility. At the same time, the degree and pace of diversification of the domestic economic base depend on how efficiently resources are allocated within the economy. Inefficiencies can hobble diversification efforts by undercutting cost

Figure 3.1 Sustainability and the economic framework



competitiveness and by allocating resources to activities that yield low returns or are not viable.

Expanding the productive base

"Converting [hydrocarbon] assets into financial wealth provides a means to invest in world class infrastructure; build efficient delivery mechanisms for public services; create a highly skilled and productive labour force; and support the development of entrepreneurship and innovation capabilities."—Qatar National Vision 2030

The first challenge for Qatar will be expanding its productive base. The concept of the productive base is comprehensive (see previous section). The focus in this chapter is on what sustainable prosperity means in operational terms, how it relates to where Qatar is going and how Qatar can best direct its development path to achieve this goal. The human, social and environmental dimensions of sustainability are investigated in chapters 4–6.

Setting speed limits on depletion and consumption

In managing the economy and the nation's productive base, Qatar must address two fundamental questions:

- At what speed should it deplete its hydrocarbon resources?
- How should it divide the value it captures between consumption and saving?

In theory, optimal depletion (essentially a choice about how much wealth to keep in the ground and how much to convert to financial resources) means selecting the path of consumption and saving that generates the maximum social benefit. But in practice, choices are limited. Previous investment decisions in the hydrocarbon sector, essentially irreversible, place boundaries around depletion options. For example, Qatar's joint venture agreements with international oil companies and long-term purchase agreements with

customers for gas set the pace at which hydrocarbons can be exploited.

A moratorium on further production of gas from the North Field is also in place until an investigation of its reservoir characteristics is completed (not expected before 2015). Future rates of depletion would be decided based on the outcomes of the investigation, taking into account reservoir conditions and estimated gas reserves, cost and technological factors, domestic market needs and expected market conditions. But wider sustainability considerations also mean that the capacity of the economy to absorb and productively deploy the financial resources from hydrocarbon wealth will influence decisions about the rate at which reserves are depleted.

Given boundaries around depletion parameters and the expected value of the income flowing to the state, the next layer of decisions revolves around how much to consume and how much to save. The government understands that these decisions lie at the crux of economic sustainability. Sustainability requires adequate saving to support investments that expand the productive base. Unsustainable outcomes occur when there is too much consumption and the value of the productive base fails to keep up with population growth.

These concepts can help define boundaries on consumption. The dividing line between sustainable and unsustainable consumption levels can be ascertained by considering how much consumption Qatar's hydrocarbon wealth can permanently support. In theory, this is equal to the annuity equivalent of the expected present discounted value of the state's hydrocarbon income stream (net of all costs), calculated over some suitably long planning horizon. This annuity value sets a ceiling on the average level of consumption that can be sustained while preserving the value of the nation's wealth (hydrocarbon and financial) at the end of the planning period. With a growing population, the calculation is a little trickier, and sustainability requires additional saving to support steady per capita consumption. Box 3.1 discusses aspects of these calculations.

The calculations in box 3.1 are illustrative but underscore the fact that sustainability places boundaries on what the country can consume while preserving wealth for future generations. As Qatar's hydrocarbon income tapers off (either through declines in production or reduced unit rents), alternative sustainable sources of income must be created to support public consumption and cover Qatar's import bill.

So, where is Qatar headed? On the one hand, high savings rates are reassuring; gross national saving over 2011–2016 is expected to average 45% of GDP (see chapter 2). On the other hand, continued high dependence on hydrocarbon revenues to finance both fiscal and import spending suggests that fiscal and balance of payments stability deserve continuous and close attention. The nonhydrocarbon fiscal deficit is expected to average 14% of GDP over 2011–2016, a reduction from the deficit of 19% in 2009. Sustainability requires that this deficit eventually be eliminated and that the nonhydrocarbon income base be adequate to fund fiscal spending and meet import needs.

Box 3.1 Discounting the future—calculating limits on consumption

Based on UN environmental accounting methods, a range of estimates of sustainable consumption levels emerge depending on assumptions about the future volume of hydrocarbon production and the real rents it generates (revenues less all costs, including an allowance for the cost of capital, all measured in real terms) and the rate at which society's future wealth is discounted (the social discount rate). To simplify, imagine that over some relevant planning period the projected net income from Qatar's hydrocarbon reserves has an expected discounted value of QR 1.5 trillion. At a real return of 3.5%, which is broadly the long-term return on a fixed-income portfolio, this equates to an annuity value of about QR 54 billion a year. But with a growing population, the preservation of initial per capita wealth would require additional saving and lower spending to support a larger future population.

The government will examine required structural adjustments as part of the wider reform of fiscal and budgetary processes. Already, government has taken decisive steps to diversify its sources of foreign investment income (see the section on building a diversified economy later in this chapter).

A national investment framework for Qatar

Another question follows logically from depletion and consumption decisions—how should Qatar invest? The form of investment matters, and once made, many investments are not easily reversed.

The concept of "genuine investment", which is the measured change in the value of the productive base over a relevant interval, embraces investments in man-made assets, in human capital, in natural capital and in social technology (such as capabilities, knowledge, research and development, and institutions). This part of the National Development Strategy 2011–2016 focuses on investments in man-made assets and on financial claims against assets that generate a future stream of income. Such investments take three basic forms: investments in the industrial and commercial development of the country, in national infrastructure and in foreign assets.

Planned investment spending

Sizeable investments are planned over the period covered by the National Development Strategy 2011–2016. Gross investment is expected to average 25% of GDP over 2011–2016. Significant additional investments in the gas sector will await decisions on the moratorium, which will not occur before 2015.

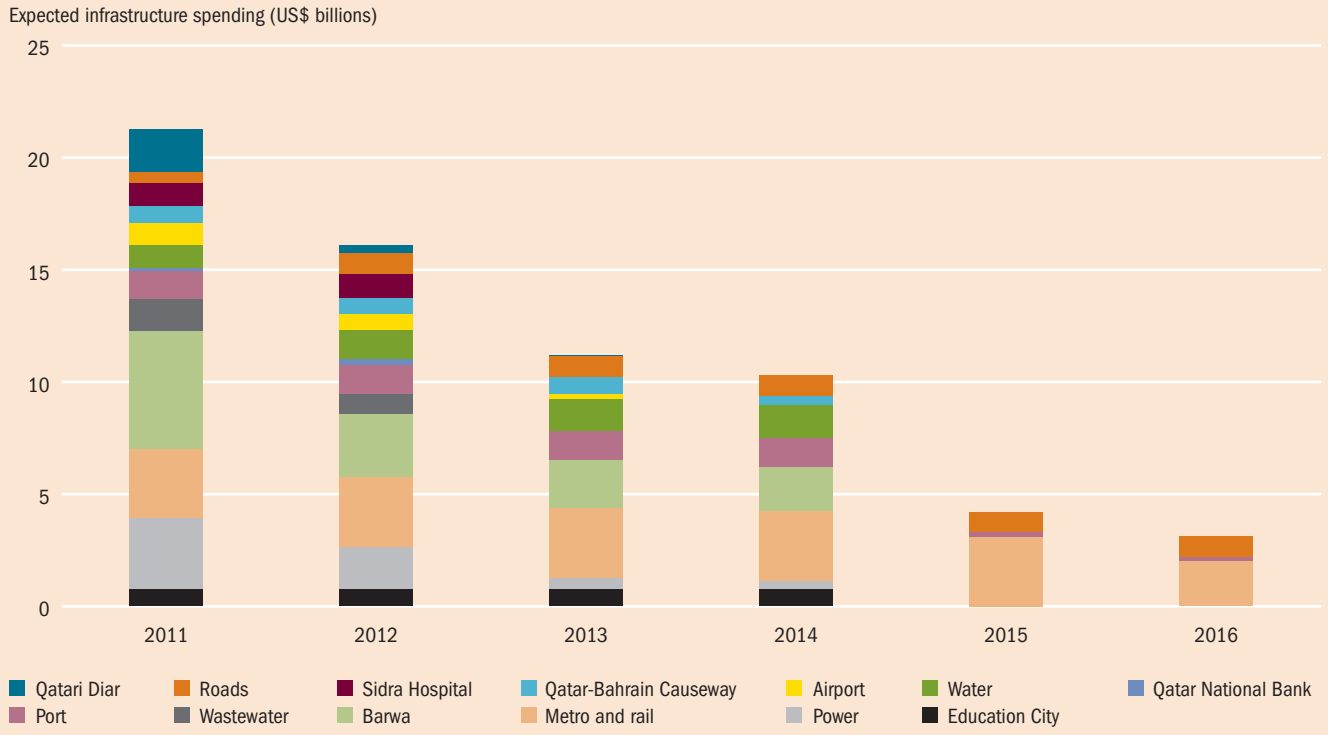
The state is heavily involved in Qatar's industrial sector, largely through the interests of the government-linked Industries Qatar and the use of state resources to fund other businesses. Many of these ventures leverage Qatar's natural advantage in hydrocarbons and energy and have a successful commercial track record, often with the involvement of foreign joint venture partners. Such partners bring technology, know-how and access to markets and global supply chains. What the partners find in Qatar is access to cheap feedstock and energy, favourable profit-sharing agreements, low taxes, freedom to remit profits and other benefits. State-linked investments—often through Q-companies, with significant ownership held by the government of Qatar or related entities—will inevitably continue to support Qatar's industrial expansion and growth.

The investment plans of Q-companies (excluding Qatar Petroleum and related companies) for 2011–2016 amount to over QR 130 billion. These include about QR 100 billion in investments by Barwa and Qatar Diar for residential and business construction projects. Next most significant are investments in health and education by the Qatar Foundation, with Sidra Hospital and Education City committing about QR 19 billion.

For Qatar Petroleum and related companies, 2010 was a pivotal year when a series of liquefied natural gas projects culminated. Nevertheless, investments will remain relatively strong over the medium term, amounting to about QR 88 billion during 2011–2016. These investments include plans for about QR 7 billion in expanded capacity of Industries Qatar companies in the petrochemical sector, including producers of low-density polyethylene, ammonia and urea.

The government also plans more than $65 billion in infrastructure spending through 2016 (figure 3.2). Current plans envision improvements in the power and water sectors, the new Doha port and the information and technology sector. Investment in road infrastructure will be critical to reducing inefficiencies and assisting regional integration. An internal rail network and a Doha metro system are also being considered. The pipeline of planned infrastructure investment raises issues of priority-setting and efficiency. Looking to the future, the government will work to ensure that the nation develops a world-class infrastructure backbone, with projects set out in an integrated national infrastructure master plan.

Figure 3.2 The government plans more than $65 billion in infrastructure spending through 2016



Source: MEED Project database.

In several areas additional infrastructure investments beyond those already planned could contribute to national development objectives. The cost of these projects—between $8.5 billion and $12.5 billion—is relatively modest, but the resulting contribution to sustainable resource management could be significant. This portfolio includes extension of the treated sewage effluent distribution system, so that it can reach agricultural areas; new facilities for the treatment of industrial wastewater; repairs and improvements to the distribution system for desalinated water; upgrades of wastewater treatment plants for production of high value-added treated sewage effluent; and upgrades of selected power generation facilities. (The specific rationale for these targeted investments is explained in the next section on enhancing technical and economic efficiency.)

Targets for 2013

- Formulate a national infrastructure strategy and master plan and strengthen coordination functions.
- Review the feasibility of additional infrastructure investments to promote sustainable resource use.

Economic rents and investment

Because Qatar's hydrocarbon assets are the property of the state, the government has a responsibility to maximize the value it captures from their exploitation. It may do this through fiscal measures, contract arrangements or some combination of both. In principle, the state will strive to capture all rents embodied in the hydrocarbon assets it owns and to ensure an adequate return on any capital that it invests. If hydrocarbon rents are efficiently targeted, the volume of private investment should not be affected (investment neutrality) because private investors will still earn their required risk-adjusted rate of return.

In practice, hydrocarbon rents captured by the state are unlikely to be maximized. One reason for this is that maximizing them would require

tailoring fiscal and contractual arrangements to each investment. The information needed to calibrate optimal contracts is unlikely to exist, and implementation capabilities will get stretched over a large number of such investments. So while the principles of optimal rent capture and investment neutrality serve as a useful guideline, pragmatism requires the application of frameworks that reflect realities and can be implemented.

In the future, as in the past, the government will ensure that the structures governing hydrocarbon-linked investments, upstream and downstream, provide adequate flexibility to deal with project specifics and changing cost or market conditions. Equitable risk-sharing arrangements will also be important. While the state will take steps to eliminate all sources of risk within its control, the elimination of operational or commercial risks through state guarantees or other means will be detrimental if it dilutes incentives for the private sector to perform. In circumstances where hydrocarbon rents are shared with private investors, the state will seek to ensure that these rents are compensated by other benefits that flow to the country (such as the acquisition of technology, infrastructure or knowledge and skills).

Investment and sustainability

No isolated investment is permanently sustainable because all capital projects have a finite life. New technologies, changing tastes, new sources of competition, reassessments of risks and exhaustion of resource inputs can bring to a close what was once a good business. Therefore, what matters for sustainability are the net resources that a project can make available directly or indirectly to support future well-being.

Qatar will leverage its cheap domestic feedstock and energy to contribute to long-term economic diversification and the expansion of the productive base. The relevant test is that associated investments provide an acceptable risk-adjusted return on the totality of the resources committed by the state. Industries that gain advantage by eliminating transport and distribution costs and locating closer to sources of energy and feedstock provide one avenue for investment.

Another opportunity is to integrate along the energy supply chain. One possibility is to export surplus power generated from gas to the region and beyond. But this will require additional cross-border investments and cost-efficient technologies. High-voltage direct-current cables are one option. They lose very little energy in long-distance transmission (about 3% per 1,000 kilometres) and perform efficiently under water. High-voltage direct-current transmission lines already connect the French and U.K. grids as well as the grids of Scandinavia, the Netherlands and northern Germany. The capital costs of such investments are continuing to fall.

Sustainability can also be given a stricter definition that equates viability with the ability to export without the benefit of temporary location cost advantages or direct or hidden subsidies. Economic activities that meet hurdle returns with all inputs priced at border prices would enjoy such a long-term competitive advantage.

Other countries provide examples of activities that meet this robust test of sustainability. Petrochemical production in Singapore, which relies completely on imported feedstock, is sustainable in this sense. Likewise, the Norwegian oil services industry, which exports globally, would be viable even if the country had no domestic oil production. The challenge for Qatar is to carve out its own niches of advantage in the hydrocarbon supply chain, exporting services and knowledge to other countries. One promising area is the processing, transportation, distribution and storage of liquefied natural gas. Qatar has an established advantage in production and transportation and a potential advantage in vertical integration of connected activity in distribution and storage.

Currently, Qatar lacks a focal point for investment and industry development. Qatar Petroleum and related companies as well as other entities in the energy sector have performed well in spearheading investments, but as Qatar diversifies its economy

beyond carbon (discussed later in this chapter), a stronger policy and coordination function may be useful. In some countries, high-level independent agencies have had a central role in advising government and implementing investment and industry development policies. Examples include the Industrial Development Agency in Ireland and the Economic Development Board in Singapore (box 3.2). Qatar will review its institutional arrangements to determine which can best support its objectives to sustain growth and diversify its economy.

Target for 2012

- Review institutional arrangements to support growth and diversification of the economy.

Qatar's investments in foreign assets

Investments in foreign currency assets help sterilize the liquidity impacts of hydrocarbon income inflows (discussed in the next section on enhancing economic stability), provide income for the future and diversify Qatar's income base. Decisions on how much to allocate to investment in foreign currency assets ultimately rests with the Supreme Council for Economic Affairs and Investment.

Decisions on financial investments for the country will address its specific needs: foreign currency reserves to support management of the currency and to meet payment obligations; liquid assets to support stabilization goals; longer term investments to diversify income and provide funds for the future; and strategic investments to accelerate the acquisition of knowledge, technology and capabilities that can expand and diversify Qatar's productive base. These matters and responsive strategies will be carefully considered within the wider context of the design of the nation's economic policy architecture.

Box 3.2 Economic Development Board of Singapore

The Economic Development Board of Singapore—a one-stop shop for investment and industry—has pursued its mandate through various avenues: promoting investment and co-investment with foreign multinational companies, providing post-investment services, facilitating access to serviced industrial land, supporting the immigration of skilled workers, funding research and development, identifying strategic sectors for its co-investment activities, brokering joint ventures between local and foreign firms, establishing technical training institutions and offering support programmes for local suppliers. The board also acts as a forum for private sector and foreign investors to elevate their concerns to the government.

The board's functions did not spring up overnight but evolved over time in response to shifting national development needs and perceived constraints. Its role in fostering Singapore's development is generally considered to have been significant.

Enhancing economic stability

The second challenge for Qatar will be "to choose and manage a pathway that delivers prosperity yet avoids economic imbalances and stresses."—Qatar National Vision 2030

Economic stability is needed if investors are going to make long-term commitments to expanding the productive base. While every economy encounters bumps in the road, excessive or prolonged volatility—with radical swings in demand, steep inflationary trends or financial convulsions—erodes business confidence, deflecting attention from strategic investments and choking off access to credit and longer term sources of finance.

The causes and consequences of instability

Chronic economic instability discourages investment, local and foreign. It eventually becomes socially corrosive, undermining trust. Although some people find ways to generate gains from the distortions and fluctuations, ordinary citizens usually find managing their uncertain economic future difficult and revert to narrowly

self-interested coping mechanisms. With social trust fractured, there is little space for participation in broader efforts to advance the public good.

Qatar has been susceptible to considerable measured volatility—among a sample of 57 countries it displayed the highest level of nominal income volatility between 2002 and 2007. Inflation accelerated sharply from 2005, hitting a high of about 15% in the first quarter of 2008 (figure 3.3). The run-up was caused by a rapid expansion in credit fuelled by booming hydrocarbon income aggravated by supply-side bottlenecks. Inflation cooled when the deep global recession of 2008 and 2009 depressed global and domestic demand.

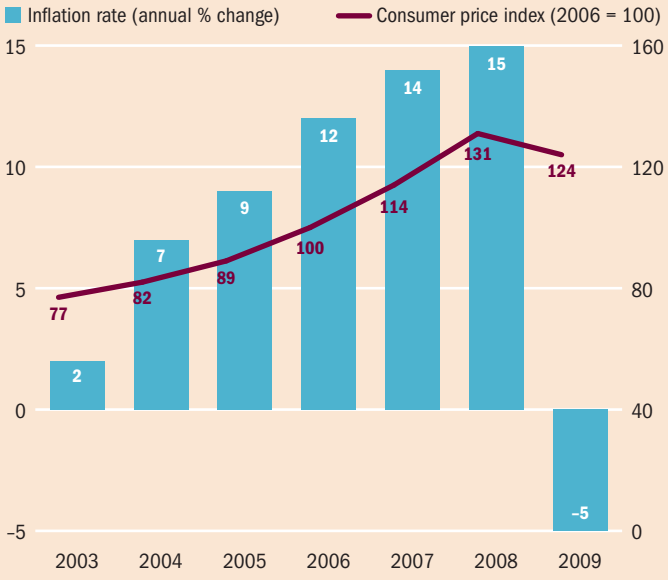
Hydrocarbon dependency exposes Qatar to gyrations in global energy markets, leaving economic planning prey to high uncertainty. In June 2008 oil sold for $114 per barrel; six months later, in December 2008, the price had declined to just $41 per barrel. For a hydrocarbon-exporting economy such as Qatar, energy price shifts hit the fiscal revenue stream directly, creating ripple effects throughout the economy (figure 3.4). The inherent unpredictability of energy prices makes it particularly difficult for policy-makers to judge the most constructive fiscal stance (figure 3.5).

There is always a risk that errors in fiscal calculations will accentuate volatility. Given the unpredictability of global oil prices, it is virtually impossible to know whether price changes are temporary or lasting. An oil price rise that is thought to be permanent might reasonably justify support for increasing services to citizens. But if the rise is temporary, the higher transfers might generate a range of unintended consequences, including a structural funding gap. Even if the price increase holds, caution is needed. If the economy is already operating close to capacity, ramping up spending in the short run could lead to inflation.

To some extent, Qatar is shielded from gyrations in international hydrocarbon prices. Most of Qatar's gas is sold on long-term purchase and sales agreements whose prices are set according to a moving average benchmark price for oil. This approach somewhat reduces the volatility in Qatar's liquefied natural gas (LNG) revenue stream. But the protection is only partial because LNG prices still track oil prices, and some of

Figure 3.3 Inflation accelerated sharply from 2005, hitting a high of about 15% in the first quarter of 2008

Consumer price index and inflation



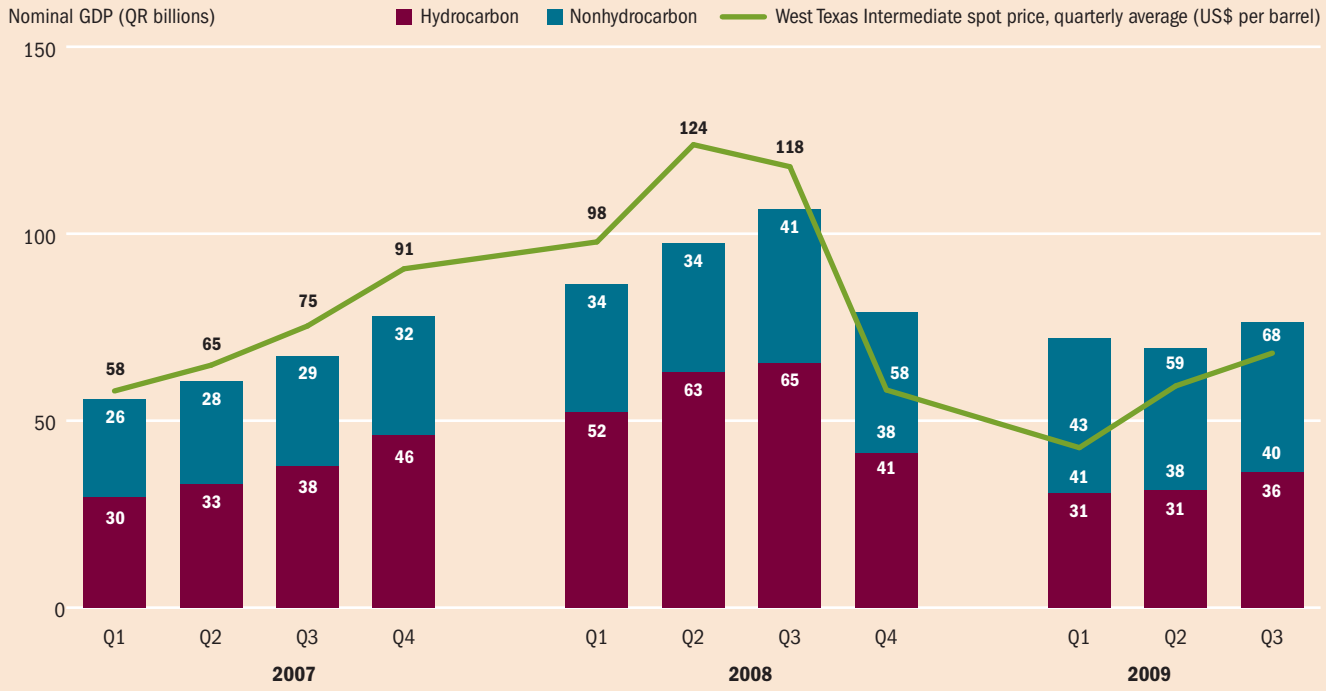
Source: Qatar Statistics Authority (http://www.qsa.gov.qa/eng/index.htm).

Consumer price index composition

Category	Weight
Food, beverages and tobacco	0.13
Clothing and footwear	0.06
Rent, utilities and related housing services	0.32
Furniture, textiles and home appliances	0.08
Medical care and health services	0.02
Transport and communication	0.20
Entertainment, recreation and culture	0.11
Miscellaneous goods and services	0.07
Consumer price index	**1.00**

Consumer price index is influenced most by rents and housing-related expenses, which fell sharply in 2009.

Figure 3.4 For a hydrocarbon-exporting economy such as Qatar, price shifts hit the fiscal revenue stream directly, creating ripple effects throughout society



Source: Qatar Statistics Authority (http://www.qsa.gov.qa/eng/index.htm); U.S. Energy Information Agency Petroleum Statistics database.

Figure 3.5 The volatility of oil prices makes it difficult for policy-makers to judge the most constructive fiscal stance

Source: International Monetary Fund (IMF) Qatar Article IV report and Statistical Appendix January/February 2010; IMF Qatar Medium-Term Baseline Scenario.

Qatar's LNG contracts provide for periodic renegotiation or adjustment in volumes purchased. Pressures for downward adjustments to contract prices would grow if there were a prolonged period of price weakness in the spot market for LNG (see chapter 2).

The policy of pegging the Qatari riyal to the U.S. dollar can create challenges for economic management. Particularly when demand conditions in Qatar and the United States diverge, Qatar Central Bank has little leeway in pulling domestic monetary levers in the desired direction. All told, the monetary arrangements required by the peg create another element beyond the government's control—similar to the exposure to global oil prices—that could generate instability in Qatar's economy.

Fortunately, Qatar's episodes of volatility have not had the viral effects that have sapped some economies tied to natural resource exports. But there is no guarantee that the future will resemble the

past. As Qatar moves from a capital-intensive spending phase of its development, the operations and maintenance of its capital assets will make significant budgetary claims that need to be carefully planned and managed. The government recognizes, too, that as growth in the hydrocarbon sector slows, sound macroeconomic policies supporting a stable environment will be critical in helping the nonhydrocarbon sector prosper and expand.

A reformed budget framework

Notwithstanding the uncertainties surrounding world oil prices, budget planning and execution are central to economic management. Indeed, the annual budget is the government's main instrument for short-run economic management. Currently, ministries submit spending plans, based largely on historical expenditure parameters, and the Ministry of Economy and Finance puts together a recommended budget for approval by the cabinet. Although the budget preparation and disbursement processes are administered efficiently, the present arrangements have some limitations.

The budget emphasizes inputs and spending controls, not functions, outcomes or impacts. Using historical benchmarks to guide allocations leads to inertia, since it is difficult to wind down old programmes and make space for new ones.

As such, the budget is framed without full attention to the future trajectory of revenues and expenditures. In particular, the preparation process does not completely factor in spending obligations that extend into the future, as when capital investments entail commitments to operations and maintenance for decades ahead.

Sizeable outlays of state resources also occur outside the government budget. Although these outlays are not considered within the core budgetary planning process, they affect the macroeconomic environment in the near term and influence development prospects in the long term. These state-linked expenditures also make claims on other resources, including land and the environment.

In recognition of these challenges, the government will launch a budget reform programme, built around a reorganization of the Ministry of Economy and Finance as mandated by Emiri Decree 31. The key goal is a comprehensive legal and budgetary framework governing public finance, consistent with Qatar's Constitution.

Target for 2016

- Establish a forward-looking and coordinated budget process, linked to the National Development Strategy 2011–2016 and to the operational plans of spending agencies (see also chapter 7).

A fiscal transformation programme will support this goal with five core elements:

- A new budgetary law embodying the principles of efficient public finance.
- A functional classification for all spending based on the UN Classification of Functions of Government.
- A "macro-fiscal" framework that helps decision-makers analyse the relevance of critical planning parameters and the fiscal and macroeconomic implications of commitments they are considering.
- A public investment programme to ensure that capital projects deliver the highest social worth and are well coordinated.
- A new monitoring and evaluation function.

The first three of these elements are in process. A decision has also been made to establish a debt management function in the Ministry of Economy and Finance. But successfully addressing implementation over 2011–2016 will require significant institutional adjustments and concerted capacity-strengthening programmes as well as the recruitment of seasoned technical experts in the Ministry of Economy and Finance, line ministries and other agencies.

Partly because of limited expertise in Qatar in macro-fiscal policy and in strategic and operational planning, the programme will be rolled out gradually and at a pace that the Ministry of Economy and Finance and other arms of government

will be able to manage. Experience worldwide, including that of advanced Organisation for Economic Co-operation and Development (OECD) countries, underscores the technical and political complexity of budget reform and demonstrates that full programmatic and performance budgeting systems take many years to establish. In the longer run, and looking towards monetary unification within the Gulf Cooperation Council, the government recognizes the need to consider harmonizing its fiscal policy framework and reporting systems with those of partner countries.

A public investment management framework

Within the reformed budget framework the government will direct special attention to the capital budget, which historically has functioned as a compilation of separate investment requests. The government's new approach will align major investment projects with the country's overarching development goals, closely considering the underlying macroeconomic and fiscal conditions. Initial improvements have already been made in coordination, but these will need to be supported by strengthened technical and analytical functions. The public investment programme will be the government's first significant step towards a more comprehensive programmatic budgeting approach, and it will firmly embed a forward-looking results orientation in the budget.

Because public investment is a core component of the country's growth and development strategy, the government will require a systematic assessment of all significant state investment commitments, including analyses of the quality of individual projects. This will be necessary for linking large state-funded investments "up" to the National Development Strategy 2011–2016 and "down" to annual budget allocations and wider funding decisions.

A coordinated public investment programme will strengthen the government capital budget by ensuring that project objectives are aligned with the National Development Strategy 2011–2016, linking the strategy to specific budget allocations. It will preserve and expand national wealth by selecting capital projects that create lasting social worth. It will address trade-offs among potential investments, committing resources where they can most benefit the country. It will also evaluate project concepts and proposals from financial, economic, environmental and social perspectives, with *QNV 2030* and the National Development Strategy 2011–2016 providing directional guidance.

Certain projects managed within the public investment programme might be best structured as public-private partnerships. The government believes that an increased private sector role, considered case by case, could improve project and investment planning, management and operations and add real public value. By providing a new framework for public-private partnerships, the government will ensure that they fit within the larger investment plan and provide a pathway for the transfer of skills and knowledge to the country and wider options on financing. Steps have already been taken to put in place a framework for public-private partnerships under the auspices of the Ministry of Business and Trade, and the need for new legislation is being considered.

Targets for 2013–2016

- Establish a public investment programme that anchors all sizeable public investment decisions in a systematic assessment of their benefits and costs relative to broad national development priorities.
- Enable private sector collaboration in public investment projects within a coherent framework that delivers development benefits to the state, including knowledge and skill transfers.

Five basic steps are needed to establish a functioning public investment programme:

- Formalizing the programme through laws and instruments and identifying the location of decision-making functions within government.
- Creating programme units within suitable agencies, with capable staff.
- Establishing supporting processes and systems, including technically sound appraisal and evaluation techniques.

- Introducing capacity-building initiatives to strengthen project preparation, implementation and evaluation skills.
- Conducting pilot projects to test and refine key features of the programme's system.

The requirements to establish an effective public investment programme are similar to those to support budgetary reform. New systems and processes are required both in the central functions of government and in the line ministries and other agencies where major capital spending decisions or implementation responsibilities are located. New legal and regulatory infrastructures are needed to support new roles, decision processes and institutional relationships. Decision-makers require support from competent technical advisors and experts with relevant implementation experience. Designing and setting up the programme architecture may take two years. Afterwards, there would be a pilot phase, followed by adjustments and full roll-out.

A stabilization mechanism

Several endowment funds already help government plan and meet its spending commitments. But as part of a wider programme of fiscal reform, the government will consider other possible mechanisms to help cushion the potential impacts of hydrocarbon price volatility on government revenues and spending. One possibility would be to set aside financial resources for investing in a fund of safe and liquid assets that could be drawn down to supplement government revenues when they are squeezed by unanticipated falls in hydrocarbon prices. In times of rising hydrocarbon prices, excess revenues could be allocated to top up the fund. In this way, government would smooth out revenues, avoiding the large swings caused by shifts in global energy prices.

Although stabilization funds require careful management, they are preferable to other means of managing revenue dips, such as selling possibly illiquid assets at a discount to fair value, ad hoc borrowing in international capital markets or reducing expenditures on an unplanned basis. A review of global experience with stabilization funds—used in countries ranging from Chile to Oman—makes it clear that they cannot substitute for stronger budgetary discipline. A technical study would be a first step in outlining possible approaches to smoothing out swings in fiscal revenue flows and considering implementation challenges.

Target for 2013

- Review options to stabilize fiscal revenue and expenditure flows

Enhanced liquidity management and deeper capital markets

Qatar Central Bank has three responsibilities: formulating and implementing monetary policy; licensing and regulating commercial banks; and managing domestic debt (in coordination with the Ministry of Economy and Finance). In the future this mandate will be expanded to include regulating the wider financial system.

Monetary stability is a critical challenge. Because the riyal is tied to the U.S. dollar and Qatar operates an open capital account, Qatar cannot run a fully independent monetary policy. Qatar Central Bank also faces challenges in coping with the monetary outcomes of fiscal spending. Currently, Qatar Central Bank controls domestic liquidity conditions through the Qatar money rate mechanism, reserve requirements for banks, active open market operations, administrative controls on banks consumer credit activities and certificates of deposit.

The government recognizes that more effective management of domestic liquidity is important for overall macroeconomic stability. While Qatar Central Bank can issue certificates of deposit with maturity of up to one year, the Ministry of Economy and Finance has yet to issue treasury bills. Because the government runs perennial fiscal surpluses, treasury bills are not needed to fund public spending. However, some surplus countries, such as Norway, issue government securities to support the development of the domestic money and capital markets and to facilitate the central bank's liquidity management. These developmental

benefits entail a fiscal cost—equal to the difference between what the government pays holders of treasury bills and what it receives from investing the proceeds.

Together, the Ministry of Economy and Finance and Qatar Central Bank will consider steps to accelerate the development of money and domestic bond markets with the goal of improving liquidity management in the short term and supporting the development of debt markets over the longer term. The government will also look at options to better calibrate the domestic liquidity implications of fiscal spending and asset management decisions.

Targets for 2014

- Introduce an extended range of instruments to help manage domestic liquidity.
- Prepare a strategy to guide broader domestic capital market development.

Again, achieving these goals will place significant technical and operational demands on the Ministry of Economy and Finance and Qatar Central Bank and will require close coordination at the highest levels of government.

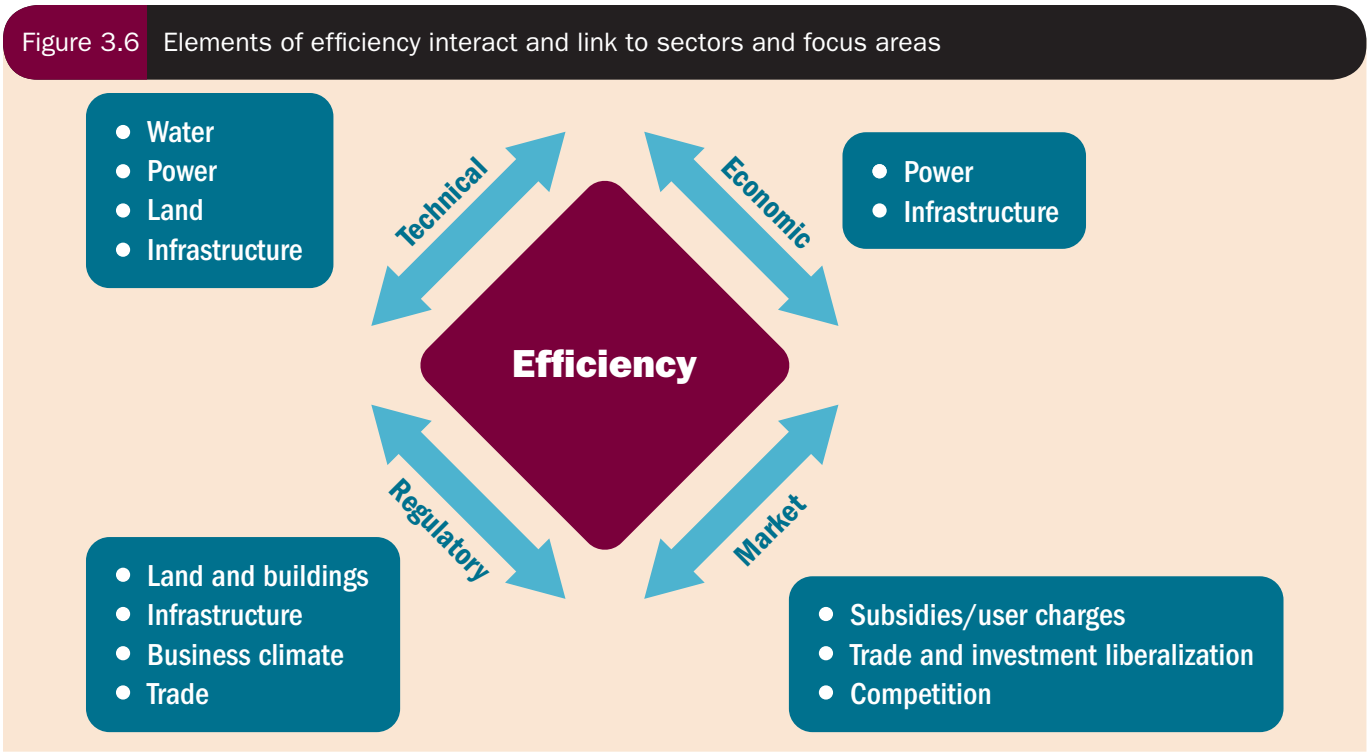
Enhancing technical and economic efficiency

Sustainable prosperity requires "open and flexible economic structures capable of competing in a changing world".—Qatar National Vision 2030

Opportunities for efficiency gains proliferate, cutting across sector boundaries. Improvements in technical and economic efficiency involve using scarce resources more effectively in a given activity or use. Improvements in market efficiency focus on allocating resources among alternative uses to maximize social benefits. Where markets do not function well, regulatory interventions can improve efficiency. Figure 3.6 illustrates how these four elements of efficiency fit together and link to sectors and focus areas.

By attacking inefficiency in technology, physical infrastructure, institutions and processes, the government can make a lasting contribution to

Figure 3.6 Elements of efficiency interact and link to sectors and focus areas



improved resource use over time. With an abundance of hydrocarbon resources but a scarcity of other vital resources such as water and arable land, a drive for efficiency is central to creating and capturing value, preserving and expanding the productive base and encouraging the private sector to develop through discovery and economic diversification.

Improved efficiency has other benefits, too. By improving the use of capital assets, efficiency measures save fiscal resources by deferring or eliminating the need for replacement investments or capital expansion. Some efficiency gains reduce waste and unwanted by-products such as carbon dioxide emissions and waste water, contributing to environment goals.

In addressing these aspects of efficiency, this part of the National Development Strategy 2011–2016 focuses on how Qatar uses its natural resources and delivers infrastructure services. Particular attention is given to desalinated water, which is coproduced with power in a process that uses large amounts of land and natural gas. Related environmental dimensions of resource use and management are examined in chapter 6.

Efficiency metrics

Efficiency can be measured by the quantity and quality of services provided for a given set of inputs (technical efficiency) and by the cost of delivering a given quantity and quality of services (economic efficiency). Other proximate indicators of technical and economic efficiency used here include levels of waste and service coverage and quality, a form of operating efficiency.

As noted in chapter 2, Qatar has made large infrastructure investments in recent years, including in power and water production. They have supported high-quality services, with further improvements expected as a result of initiatives pursued under the National Development Strategy 2011–2016. Figure 3.7 provides a snapshot of Qatar's infrastructure capacity, quality and cost.

Enhanced use and conservation of water

Few tangible aspects of Qatar's life and economy need efficiency reforms as much as water—crucial to all human activity but in scarce supply. With one of the world's lowest levels of rainfall, Qatar relies on water from three sources: desalination, groundwater and recycled water, all subject to inefficiencies that may create stresses and eventually pose a threat to water security or require large investments to ease shortages (figure 3.8 and figure 6.3 in chapter 6).

Desalination, which accounts for about half the water used in the country, depends on a costly and energy-intensive cogeneration process that uses large swathes of coastal land and requires seawater that does not exceed set levels of salinity. With rapid population growth and urbanization, the use of desalinated water has tripled since 1995, reaching 312 million cubic metres in 2008.

Losses of desalinated water due to leakage are high by international standards. Some estimates put network losses as high as 30%–35%, compared with an OECD average of 18%. Leakage in the distribution system for desalinated water costs as much as QR 1 billion a year. The government's strategy for improved water management calls for an aggressive five-year programme to cut network losses. Over the long term the government will also be investigating the feasibility of applying new reverse osmosis technologies that do not consume as much power and that can tolerate higher salinity levels than current processes.

Fresh groundwater drawn from natural aquifers accounts for about 36% of water use, but efficiency problems are again evident. An estimated 250 million cubic metres of groundwater are extracted each year, mostly for irrigation, five times the 50 million cubic meters of freshwater recharge that comes from Qatar's meagre rainfall. With demand far exceeding the recharge rate of aquifers, Qatar's freshwater reserves are under stress and at risk of exhaustion.

Figure 3.7 A snapshot of Qatar's infrastructure in capacity, quality and cost

Focus area		Meeting Qatar's needs by 2016?[a]		Service quality		Efficiency	
Power and water	Power supply	2020	Committed capacity significantly exceeding demand	Limited number and duration of interruptions; approximately 100% network coverage		High power generation CAPEX; low plant use after 2011 (60%); transmission and distribution losses in line with benchmarks	
	Water supply	2020	If RAF A in operation until 2020, no further capacity additions required	Quality of water in line with benchmarks; 98% network coverage; water stock limited to 1.5 days		High network losses (30%–35%); high per capita demand	
	Wastewater	+2030	Networks being developed; treatment capacity additions in 2011 satisfying needs beyond 2030	River quality of treated water; investigation of water quality upgrade		Limited treated sewage effluent use (60%); low expected treatment plant use after 2011	
Transportation	Roads	+2030	Current network congestion, but road expansion plans based on very high population projections	Lowest perceived quality of road in the Gulf Cooperation Council (World Economic Forum); need to strengthen public transport		Construction cost in line with Gulf Cooperation Council average but low use if network realized based on current population projections	
	Seaports	+2030	Current port operating beyond capacity; new Doha port expected with large excess capacity if phases 2–3 realized	Current port congested; new Doha port expected in line with international standards		Expected low use of new port; high share of total cost incurred in phase 1 (+70%)	Megaprojects
	Airports	2020[b]	Current airport operating beyond capacity; new Doha International Airport phase 1–2 required—phase 3 expansion could be postponed (from 2015 to 2020)	Current airport congested: 3 stars (out of 5) Skytrax rating; new Doha international airport expected in line with international standards		New Doha international airport with high capital expenditure per passenger; high share of total cost incurred in phase 1–2 (70%–80%)	
	Metro	+2030	Very large network (85 kilometres) relative to Doha transportation demand	Service quality expected in line with international standards		Expected low use; expected high lifecycle cost	
	Rail	+2030	Network covering main hubs in Qatar	Service quality expected in line with international standards		Low number of passengers per kilometre of railway compared with EU average	
Information and communication technology		na	Limited penetration gap in Internet; national broadband network expected with 95% coverage	Bandwidth performance below international benchmarks; new national broadband network to increase performance to 50 megabits per second		Planning in preliminary stage	

Adequacy of supply, quality and efficiency · Attention point · Critical issue

a. Current or planned capacity is adequate and is not expected to reach saturation until the year indicated.

b. Refers to phases 1 and 2.

Groundwater supplies are subject to extensive waste and loss, notwithstanding their scarcity. Much of the groundwater is used for flood irrigation of open fields, with high levels of evaporation. Farmers pay a small pumping charge but otherwise have free use of groundwater, providing little incentive for conservation.

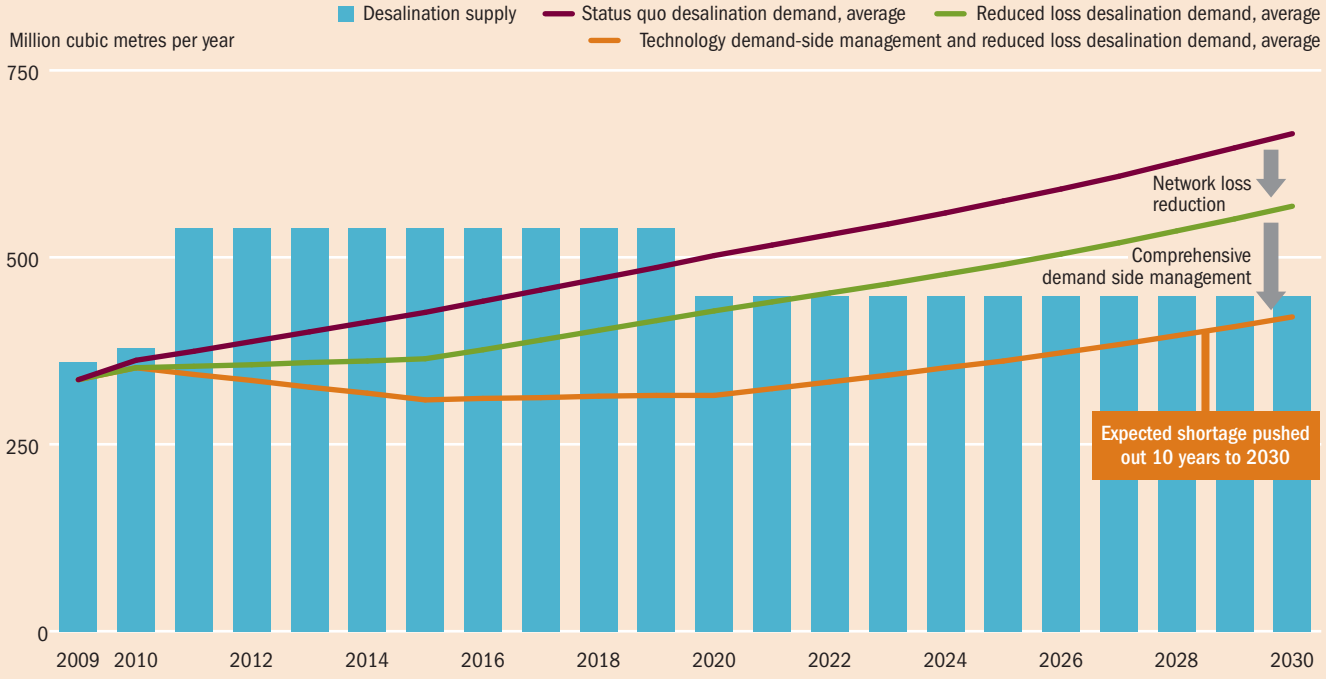
Recycled water, or treated sewage effluent, accounts for the remaining 14% of the water used in Qatar. But because supply currently outstrips demand, about 40% of treated sewage effluent is discharged into septic lagoons. Some wastewater —particularly from industrial users—is not treated but is discharged or stored in tanks that could leak, contaminating the limited supplies of groundwater (see chapter 6). Qatar could make far more extensive use of recycled water, which is a quarter as expensive to produce as desalinated water.

Inefficiencies are also evident on the consumption side of the water equation. Qatar's per capita water use is one of the world's highest. Agriculture makes heavy demands on water, disproportionate to the value created by the sector.

Excessive water use stems partly from technical and economic inefficiencies. The government is already addressing some problems. Projects to

Figure 3.8 Qatar relies on water from desalination, which is subject to inefficiencies that may threaten water security or require large investments to ease shortages

Desalination water supply and demand, actual and projected, 2009–2030



Note: Demand curves represent average of two projection scenarios from *Population and Employment Projections, 2008 to 2030: A Framework for National Planning* (QSA/GSDP). Projections are approximate and use the most reliable data available. Treated sewage effluent is not considered a substitute for desalinated water due to current social and infrastructure-related limitations. These projections assume network loss reduction from approximately 30% to 18% (OECD average) by 2015 and change in behaviour and technology reaching 60% adoption by 2020 for commercial and residential entities and by 2015 for government entities.

Source: National Development Strategy 2011–2016 estimates.

seal leaks are under way, with plans to accelerate the work on pipes, pumps and flow meters. The government aims to bring the loss rate down to 10%.

The government will also be spearheading a series of water-saving initiatives. Substantial amounts of water would be saved by equipping faucets with "water savers", which the government will consider installing. The government is also weighing the best ways to encourage drip and soak watering of gardens and increased use of covers for swimming pools. Other initiatives will encourage water saving by commercial users. To monitor the impacts, the government will extend the current programme of installing water meters and examine the benefits of "smart meters".

In agriculture, a new approach is needed. Irrigation methods that involve flooding fields—with high losses from evaporation—need to be replaced with drip irrigation systems, which use much less water for a given yield. Over the longer term, solutions to agricultural water issues need to be formulated in a wider framework of the commercialization of sustainable farming methods and domestic agrofood products.

Increased treatment of industrial and household wastewater would create recycling opportunities while removing environmental hazards (see chapter 6). The government will consider investments in both areas, looking for opportunities to expand both the collection and the distribution networks for recycled water. By distributing recycled water to more users, the government can relieve demands on other sources of water and reduce discharge. The government will also look closely at options for infrastructure for collecting and treating industrial wastewater. By extending the

domestic collection and treatment of wastewater, the government can reduce dependence on septic tanks, an environmental priority.

Targets for 2013

- Cut network leaks of desalinated water to 10% or less from the current estimate of 30%–35%.
- Ensure that all water consumption is metered.
- Support installation of water-saving technologies for households and other users.
- Develop a programme of water-saving measures in plans for agricultural development.
- Expand treated sewage effluent networks to increase the use of recycled water.
- Examine the feasibility of industrial wastewater collection and treatment systems.

The implementation challenges of water-saving initiatives vary. Stemming distribution losses involves technological fixes. Introducing water-saving devices to households is fairly straightforward, as Abu Dhabi and Canada have shown. Encouraging the use of water-saving appliances will require effective communication, but might also need supporting incentives (see below on economic efficiency). Regulations that are difficult and costly to enforce (such as bans on hosepipes for washing cars) may be unnecessary if the government can popularize a water-saving mindset.

Changing water consumption patterns in agriculture is vital to an integrated approach to water management. It will require a fundamental and prolonged reorientation of farming, involving a range of factors including government subsidies. Recharging aquifers with treated sewage effluent (if shown to be technically feasible) would ease the looming water scarcity problem. But without changes in irrigation methods and crop mixes, farming will continue to make heavy demands on Qatar's precious water resources. The government is committed to addressing this challenge and finding solutions within a wider programme of agricultural reform and development of the domestic food industry.

Improved efficiency in energy and gas use

Power distributed through Qatar's grid is coproduced with desalinated water using gas turbine technology. The gas used to produce domestic power has an opportunity cost in forgone export revenues. For a few large industrial users, power is provided through standalone generation facilities.

Although the country's power needs are fully served by a high-quality and reliable service, Qatar could achieve greater efficiencies through technical enhancements. Such changes could save 5% of domestic gas consumption—and possibly more. Even though Qatar's abundant gas supplies are expected to last well into the future, improved efficiency would yield both environmental and economic gains. Savings would have the added benefit of providing a buffer for the supply of gas, which is ample in the long run but constrained over shorter periods of time. By burning less natural gas, Qatar would support the national goal of lowering carbon dioxide emissions (see chapter 6), reducing the country's contribution to global climate change. Gas saved domestically can be sold overseas, increasing national income.

The government also recognizes potential technical efficiency gains in power production. Upgrading power plant turbines brought on prior to 2000 would increase thermal efficiency by 4%–6%, enabling total gas savings of about 2% of estimated local demand by 2016. The government will work with producers to quantify the expected savings and to find ways to share the costs of upgrading.

With air conditioning accounting for 67% of residential power consumption, a shift to modern energy-efficient systems would bring significant savings. Cutting heat emitted by other appliances would lower air conditioning needs. Government will look at ways to encourage the use of energy-efficient technologies, such as automated sensor lighting systems that cut power demand directly,

with the extra payoff of reducing the demands on air conditioning when the heat from light fixtures is lowered. Wider use of district cooling systems on domestic and commercial premises would save on power and further the environmental benefit of expanding the market for recycled water. For new structures, gains will come from efficient design, backed by government-mandated green building codes, setting standards for such elements as better insulation and increased shading and reflection.

Kahramaa, the country's power and water distribution company, acquires power under long-term purchase agreements with independent power and water producers. From a sustainability perspective, the state should aim to minimize the cost of the gas consumed in producing power and water. Dispatching the most efficient combined power and water generation facility to the grid first and adding incremental supply according to gas efficiency might yield further economies. Kahramaa will study possible opportunities for enhancing the efficiency of power dispatch.

Finally, renewable energy presents opportunities for Qatar to enhance its future energy mix, conserve gas and reduce carbon emissions, once technologies become cost efficient. The greatest potential lies in solar energy, but other technologies may play a part depending on still-evolving technological and economic parameters. The Ministry of Energy and Industry will create a committee to examine the potential of renewable energy resources in Qatar.

Targets for 2013

- Study opportunities to lower gas consumption per unit of combined energy and water produced through enhanced dispatch.
- Improve thermal efficiency in power production.
- Advance the adoption of energy-saving technologies.
- Keep Qatar's green building code implementation on track.
- Establish a committee on renewable energy at the Ministry of Energy and Industry.

Interventions to achieve these goals should follow an assessment of their costs and benefits, drawing on the experiences of other countries. Where advantageous, the private sector should participate in the design and implementation of initiatives, helping shape incentives to encourage sustainable energy use. For independent power and water producers, more efficient dispatch arrangements might require contractual changes, but aggregate savings to the country could be sufficiently large to make investors whole again under any revised arrangements.

For conservation efforts in water and power to succeed, the government needs effective communications and stronger regulatory capacities. A key part of the robust demand management architecture will be the establishment of an independent regulator covering power and all aspects of water (see below and chapter 6).

Adding value to infrastructure

Investment decisions by the private sector are critically influenced by the availability and quality of infrastructure services, which influence costs, productivity and asset returns.

Qatar's significant infrastructure investments in the past decade (see chapter 2) are paying off. Its capacity across all infrastructure subsectors is likely to be adequate through at least 2016, and the quality of services is expected to be generally high. While infrastructure service quality is below par in some areas, plans for upgrading are well advanced (see figure 3.7). In one or two subsectors, there might be a need to reconsider current proposals as a result of changed circumstances.

Airport

After completion in the next two years of phases 1 and 2 of the new Doha international airport, service quality will meet the highest international standards, with capacity likely to remain adequate at least until 2020. A decision on the commissioning of phase 3 will be assessed subsequently within

the wider context of public investment planning parameters and based on realized traffic flow.

Information and communications technology

Currently, there is a quality gap in information and communication technology services, with bandwidth below international standards. Investments in a national fibre-optic network will soon close the gap, and the government will support private providers in ensuring that the new network reaches all parts of the state (see below).

Seaport

The port of Doha, which is operating at full capacity, is congested, with delays the norm. The planned new port, to be located at a distance from the Corniche, will relieve the congestion. The plan is to construct the new port in three phases: phase 1, scheduled for completion by 2015, will accommodate up to 2 million 20-foot container equivalent units a year; phases 2 and 3, scheduled for completion in 2018 and 2025, will each add 2 million more. These plans were formulated in 2008, when global trade was booming and growth looked set to continue.

In mapping infrastructure investments, planners make assumptions about the future, recognizing the unknowns. A trade-off typically exists between providing capacity ahead of need and delaying capacity additions until demand materializes. In building ahead of time, planners lose the option of leveraging future design advances and technology. But deferral risks supply bottlenecks and larger costs in the future. If the expected costs of inadequate capacity outweigh those of temporary oversizeing, planners should opt for early investment and overcapacity in the short run.

More recent projections of global growth and trade anticipate a significant slowing of growth over the optimistic forecasts made in 2008. These new projections suggest the risk that the new Doha port would have substantial excess capacity on its scheduled opening in 2015, with traffic requiring only half the capacity created. It also seems likely that the planned capacity additions in 2018 and 2025 would widen this gap. To saturate planned capacity by 2030, direct shipment demand would have to grow at an average annual compound rate of 15%, which far exceeds the assumptions built into the baseline in chapter 2.

Other factors also suggest that growth is likely to fall short of that required to saturate capacity. Doha's location, distant from international sea lanes, limits the potential for growth in transhipment traffic. In addition, the 2008 design is unlikely to have factored in other recent developments, including the planned expansion of the nearby Mesaieed and Ras Laffan port facilities and prospective investments in a regional rail network. All would divert traffic from the new Doha port. Although the need for a new and larger port is compelling, the design and intended phasing of the commissioning of the new Doha port will now be reviewed.

Target for 2011

- Expedite a review of phases II and III of the new Doha port.

Roads

Qatar, ranking 41st worldwide in the quality of its roads according to the 2010 World Economic Forum survey, is looking to upgrade its road infrastructure, now congested and inefficient.

Traffic congestion stems largely from a fast-rising population, limited public transportation services, suboptimal traffic management and disruptions from road upgrading and expansion. Current plans to extend the road network are founded on assumptions of continuing high population growth to 3.8 million by 2030, which now seems implausible. Recent projections by the Qatar Statistics Authority and General Secretariat for Development Planning suggest that Qatar's population may be substantially less than this projection, in which case the proposed road network would be underutilized, particularly outside Doha city centre.

In the city centre, where congestion is worst, spatial constraints limit the building of new roads and the expansion of existing ones. Here, better traffic management initiatives (such as better signalling) and more attractive public transportation (say, through increased bus network coverage and service quality) are two alternative solutions.

Rail

Planners are already at work on Qatar's national rail network of about 350 kilometres, a project budgeted at approximately $9.1 billion. Targeted for completion by 2017, the network will link Qatar's main industrial and residential hubs through high-speed passenger rail and freight services. The network will be connected to the common Gulf Cooperation Council rail network, also expected to be operational in 2017. Because Qatar is served by only one, often congested land border crossing to Saudi Arabia, the completion of the rail network will significantly improve connectivity to Qatar's hinterland in the Gulf Cooperation Council countries. Benefits from the improvement will depend on achieving a good match between the supply of services and potential demand, as well as providing the appropriate level of service.

For rail demand to be realized, the planned rail networks in the other Gulf Cooperation Council countries must also be developed. Challenges might arise in interoperability, regulation, technical capabilities and financing among the Gulf Cooperation Council countries. Greater coordination within Qatar is also required among the entities involved in road and rail planning, including Qatari Diar, the Urban Planning and Development Authority and the Qatar–Bahrain Causeway Foundation.

Doha metro

Plans for the greater Doha metro system are in place. Qatari Diar and Deutsche Bahn have formed a consortium to manage this megaproject. Plans call for the system to be built in three phases, with expected completion around 2025 and an estimated cost of $27 billion.

While the need for improved urban transportation infrastructure in greater Doha is indisputable (see above), the scale and scope of the project are based on implausibly high population and passenger-traffic projections. There is a risk under the current design that costs per passenger journey could be exceedingly high. As is the case for the planned new Doha port, the assumptions underlying the design of the metro and its economic and social benefits merit close review.

Target for 2011

- Review the planned Doha metro system in light of realistic population passenger-traffic assumptions, costs and wider economic, social and environmental impacts.

Improved efficiency of land use

Agriculture accounts for 4% of available land in Qatar, and the Qatar Programme for Food Security estimates that 15% of the country's food is supplied domestically. Agricultural yields are generally lower than those of other Gulf states, partly because of farming methods that are outdated or badly matched to local conditions. Low use of fertilizers and modern farm machinery reduces efficiency further. Significant expansion of agricultural production will be possible only with the adoption of different crop mixes and farming methods that are water efficient.

The government has requested that the Qatar National Food Security Programme and the Ministry of Environment study farming methods and land-use patterns and work towards a new strategy for food and agriculture. This plan must take into account the full economic and environmental costs of the country's system of farm support.

Industrial land use is subject to fragmented regulation and procedural encumbrances, and the

associated infrastructure services are of variable quality. Some efficiencies and improved services have been realized through programmes designating specific areas for industrial uses, including a number of "industrial cities" to serve the hydrocarbon sector and related industries. Qatari Diar's three economic zones, once approved, will represent a significant step forward in the availability of high-quality industrial land.

Efficient land-use planning needs to be integrated across uses—industrial, residential, commercial, recreational and infrastructure. Qatar's National Master Plan and the related Integrated Transportation Plan, currently in process, will set out a detailed blueprint for physical land use and transport planning through 2032. Optimal use of land resources and sustainability are key themes of the Master Plan (see the subsection on land regulation below).

Target for 2011

- Approve and implement a National Master Plan for integrated land use and transport planning.

Target for 2013

- Establish well serviced and efficiently managed and regulated special economic zones for industrial land.

Target for 2016

- Achieve sustainable improvements in agricultural productivity.

Implementation of some of these programmes is already under way, and further progress is anticipated. Decisions are awaited on the establishment of new economic zones. Preparation of Qatar's National Master Plan is in its final stages, and approval is expected in 2011. The public investment programme and Qatar's National Master Plan will need to be closely coordinated on issues linked to megaprojects. But the reform of agriculture will take more time and involve a range of complex issues, including access to and use of land and water, application of subsidies and changes in the mix of crops and livestock.

Enhancing market efficiency

Market efficiency is about putting scarce resources to their best use. But markets do not always do this well. Where there is scope to exercise market power—and where there are externalities, information gaps or forbidding transaction costs—markets may be inefficient or may not work at all. In such circumstances there may be a role for direct regulation to protect the public interest. Although government regulation can improve the operation of markets, government failures and interventions can add to problems, throwing grit into the working machinery of the marketplace.

Alignment of user charges with economic costs

Qatar provides citizens free health and education services. Farmers rely on free access to groundwater, natural fertilizers, pesticides, vegetable seeds and veterinary services. Land—for farmers and many commercial ventures—is available at subsidized levels. Subsidized credit is provided to some commercial firms, and investors often enjoy tax holidays. Water and power are free for citizens, and most infrastructure services are available without charge. State employees are promised a generously supported pension as well as financial assistance for housing.

Although there is ample economic and social justification for some subsidies (such as those for health and education), others are at odds with the aspirations of *QNV 2030* and Qatar's sustainability objectives. In particular, user charges for water, power and fuel warrant scrutiny.

Today, consumers in Qatar have little information about the wider impacts of their consumption behaviour. Voluntary restraint by a more sensitized and socially aware public, along with water-saving technologies, could result in significant savings. But water subsidies still eclipse the scarcity and true value of the resource and contribute to overconsumption and waste. User charges that better reflect full economic costs could make a significant contribution to redirecting Qatar's precious

natural resources to higher value uses. Such efforts might initially be targeted to the non-Qatari population and industrial and commercial users.

Similar public awareness efforts, coupled with conservation-oriented tariff structures, could boost efficiency in power and fuel consumption. These measures would not only have fiscal benefits for the state but would also be environmentally beneficial.

Target for 2014

- Phase in user charges for power, water and fuel that better reflect the full economic costs of production.

The review of user charges should be part of a wider campaign to improve demand management for water, power and fuel. The benefits of higher user charges need to be clearly communicated ahead of time, and the introduction of higher charges can follow measures that generate gains in technical efficiency. If user charges are extended to Qatari households, households that face hardship can be compensated through direct income transfers. And a set level of services could be exempted from charges for Qatari households with low income. To support these measures, the creation of an integrated power and water regulator will be important (see below).

Preservation of fish stocks

Where economic incentives fail to protect common or open access resources, those resources can come under pressure. The problems with water use in agriculture described earlier occur partly because no individual farmer has an incentive to reduce water consumption. But collectively, farmers' steady depletion of freshwater aquifers will eventually hurt all society, starting with the farm sector. Qatar's fishing industry presents a similar challenge. As in many other parts of the world, fish stocks are being seriously depleted, because there is no incentive for any one fishing boat to limit its catch. The environmental dimensions of this problem are considered in chapter 6.

To serve the public interest in ensuring the sustainability of fish stocks, the government will explore effective limits on both the fishing fleet and the catch, including restrictions on the size and age of fish that can be caught and sold. The government will develop enforcement capacities to ensure that new regulations are followed. It will also consider opportunities for the development of aquaculture to meet future demand.

Target for 2014

- Increase fish stock levels, apply effective regulation and create a domestic aquaculture capability.

Effective implementation will require stronger regulation both at fishing sites and onshore, where fish catches are landed. A specialized function would support sustainability objectives, as would better information systems. The development of a local aquaculture capability might first require state support for technical and financial feasibility studies and possibly targeted and temporary financial assistance for new ventures. But the objective must be to establish commercial viability at the soonest point, so any financial subsidies must be temporary.

A more competitive economy

Increased competition could make a great contribution to market efficiency. As a member of the World Trade Organization, Qatar maintains comparatively low tariffs on tradable goods. However, a number of services, including ground transportation, food imports and district cooling, lack competition and the discipline that follows.

In 2006, Qatar enacted a law protecting competition and prohibiting monopoly practices to enable competition to benefit both consumers and businesses. A limitation of the law is its exemption of entities controlled or owned by the state. In addition, implementation of the law, centred in the Qatar Chamber of Commerce and Industry, has focused on responding to specific consumer complaints. The government intends to provide resources to ensure effective implementation of the wider antitrust provisions of the law.

Reducing barriers to entry strengthens competition. The government intends to continue its programme of progressive liberalization of restrictions on foreign direct investment and to add to the list of sectors where foreign equity participation is not restricted. The government recognizes that administrative and procedural processes should not thwart the intention of these provisions.

Targets for 2012–2014

- Design a robust implementation programme for the existing competition law, supported by the necessary capabilities.
- Expand liberalization of trade in services under the General Agreement on Trade in Services.
- Continue the programme of foreign investment liberalization.

Although comparatively straightforward commitments, their effective implementation will require that Qatar have access to policy, technical and advisory skills that are in short supply locally. Gaps include expertise and knowledge to support developing an agenda and liberalizing trade in services.

Regulation and efficiency

Governments regulate to improve efficiency in allocating society's resources. Regulation may also influence noneconomic, social or cultural goals. The focus here is on economic regulation.

There are many forms of regulation. Most work by restricting behaviour or choice in circumstances where markets cannot be expected to lead to the best outcomes. Markets may not work properly because of information gaps, externalities (benefits or costs incurred by third parties) or forces that thwart competition. In such cases, the government may regulate in the public interest. The normal arenas for government regulation include finance, the environment and natural resource access and use. But regulation can also be a source of inefficiency, and regulatory agendas sometimes stray.

Better business regulation

The World Bank's Doing Business studies point to several regulatory encumbrances that investors in Qatar face when trying to establish a business or conduct business operations, ranging from inefficient licensing processes to burdensome customs regulations. The Ministry of Business and Trade is now looking at ways to remove unnecessary red tape and to streamline other regulations that hobble commerce.

Target for 2011–2014

- Streamline business and trade regulations and achieve a significant improvement in the World Bank's Doing Business scorecard.

Significant improvements in the business environment will depend critically on coordinating and implementing capabilities within the Ministry of Business and Trade and its ability to promote needed regulatory and procedural changes in other parts of government. These issues warrant careful consideration as the ministry develops its own operational strategies.

Improved infrastructure regulation

Plans for Qatar's infrastructure anticipate a larger role for private investment and public-private partnerships (see the section on promoting stability above). A balanced regulatory framework will safeguard the public interest while allowing for a sufficient return to attract investors.

Regulation of infrastructure in Qatar is uneven and somewhat haphazard, with little cross-fertilization of ideas or cooperation across sectors. Some areas suffer from a lack of regulation while others experience inefficiencies because of too much red tape. The absence of a single regulator for water resources contributes to inefficient use in the midst of water scarcity. The rules governing industrial land often conflict or change, increasing costs for business and inhibiting private sector expansion. Some licensing procedures serve little or no purpose but cost businesses money and time.

In designing regulatory functions, it is helpful to study experience and use the most effective models. There is a strong consensus that independent regulators or regulatory functions can best address the multiple goals of regulation. This model locates regulation below the policy and legislative functions of government and above the operation of markets, with each layer separated from the others. Ministers, accountable to the political leadership, set the broad direction, including the laws under which regulation and market operations function. Regulatory agencies are accountable to ministries but are functionally independent, setting standards, tariffs or rules to ensure that services meet the required standards. Independent regulators can also settle disputes or impose penalties for violations of rules. Operators should be commercially motivated, disciplined by markets as well as accountable to regulators, and protected from political interference.

Qatar lacks these separations (figure 3.9). Agencies in the infrastructure sector often mix the three functions of policy-maker, regulator and operator. In other areas, such as land regulation, there are multiple, overlapping regulators.

Most of the overlaps are between regulatory and operational functions—a potential source of inefficiency. The risk for reduced service levels

Figure 3.9 Operators should be commercially motivated, disciplined by markets as well as accountable to regulators, and protected from political interference, but Qatar lacks these separations

Focus area	Current agency	Policy-maker role	Regulator role	Operator role
Power, water and wastewater	Kahramaa		• Defines requirements for power and water infrastructure	• Builds, manages and operates power and water transmission and distribution networks
	Ashghal		• Defines requirements for drainage network and construction standards	• Builds, manages and operates wastewater and drainage systems
	No agency identified		• Tariff and pricing management • Requirements and use of treated sewage effluent[c]	
Roads	Urban Planning and Development Sector	Oversees urban planning at the state level	• Defines standards for road design	
	Ashghal		• Sets safety and construction standards	• Constructs and maintains road networks
Airports	Civil Aviation Authority		• Sets standards for aircraft equipment manufacture and maintenance • Licenses pilots and engineers • Sets standards for airport safety and operations • Sets standards for air traffic control	• Supervises the management of Doha International Airport • Oversees air freight operations
Seaports	Port Management Company[a]		• Vessel performance, regulation regarding loading and offloading of cargo from vessels, tariffs and port charges	• Manages civil ports and port operation standards
	Department of General Transport Affairs[b]		• Classification and maintenance standards, licensing of seamen and personnel, ship and small craft registration, maritime regulation	
Information and communications technology	ictQATAR	Defines policy and direction of information and communications technology infrastructure in Qatar (primary driver behind Qatar National Broadband Network)	• Performs spectrum management, type approval, satellite broadcast regulation, consumer billing	• May participate directly in development of Qatar National Broadband Network

Functional separation in Phase 2

a. The former Customs and Ports General Authority has been split into the Port Management Company and the Department of Customs.

b. Previously known as the Department of Maritime Affairs; it has recently moved under the Ministry of Business and Trade.

c. Regulatory functions not currently being handled by any agency.

Note: The rail and metro sectors are not addressed because they are not yet operational (and therefore not in need of regulation).

Primary role
Secondary role

rises when one entity is providing a service, setting the required standards for its delivery and monitoring compliance with those standards. The potential consequence of such an arrangement is reduced service quality for end users and, possibly, lower service standards in some sectors.

In Qatar some regulators carry out certain operational functions, and some operators regulate their own service. The Civil Aviation Authority falls into the former category. The Supreme Council of Information and Communication Technology, in addition to being the primary regulator for all activities pertaining to telecommunications and information technology, may also invest directly in specific initiatives, such as the infrastructure for the Qatar National Broadband Network.

Some operators function as regulators. Ashghal, Kahramaa and the Port Management Company are operators that regulate their own activities. Although not a formal regulator, Kahramaa monitors service levels and sets performance standards for infrastructure assets while operating transmission and distribution networks. Ashghal's role in roads and drains has similar overlaps. The Port Management Company is responsible for setting port operation standards and for regulating vessel performance, loading and offloading cargo and tariffs and port charges.

Integrated water management requires regulatory independence and unification and will require closely coordinated regulation of both water and wastewater from production, distribution and consumption to reuse and recycling. Given that water and power are coproduced and depend on each other, a single regulatory authority could oversee all activities related to these sectors. Ideally, such a regulator would be independent, drawing on specialized technical expertise. Abu Dhabi has established an integrated and independent regulator for power, water and wastewater. Regulatory reform could improve efficiency and service delivery in other sectors.

Target for 2014

- Establish an independent and integrated water and power regulator.

Once regulatory and operational functions are separated, policy and regulatory independence could follow and may be important for supporting competition. When private sector involvement is introduced in an infrastructure sector, it is vital that the regulator of that sector not be responsible for policy as well. For example, a state-owned monopoly operator should not be regulated by an agency under the same ministerial organization. The regulator's links to the incumbent state-owned enterprise could put any aspiring private participant in the market at a disadvantage.

Some steps have already been taken to strengthen the regulatory infrastructure. The Supreme Council of Information and Communication Technology has a high degree of independence. In the financial sector steps to unify regulation are at an advanced state, with the newly created regulator to come under the wing of Qatar Central Bank.

Stronger land regulation

Qatar has no specific planning law or comprehensive legislative framework for the preparation, approval and implementation of development plans. No single agency has specific responsibility for the implementation of land-use planning for Qatar, resulting in considerable inefficiency.

The government intends to respond to these challenges in four ways. First, it will formulate a robust land-use policy for developing a spatial hierarchy of coherent plans. Second, it will strengthen the regulatory processes for standardizing systems, codes and controls. Consideration will be given to institutional arrangements that can support improved and integrated regulation. Third, to support new arrangements, the government will foster collaborative mechanisms among all the relevant players. This must include integrating the plans of entities that operate outside the current system. Fourth, the government will need to direct

more resources to strengthening planning and implementation capabilities in municipalities and at the centre.

Target for 2011–2016

- Approve and execute Qatar's National Master Plan.

Building a diversified economy

Qatar intends to build "a diversified economy that gradually reduces its dependence on hydrocarbon industries, enhances the role of the private sector and maintains its competitiveness".—Qatar National Vision 2030

Having achieved enormous gains by developing the hydrocarbon sector, the government is poised to take on another significant challenge—diversification. A diversified economy is more capable of creating jobs and opportunities for the next generation and is less vulnerable to the boom and bust cycles of oil and natural gas prices.

Diversification is also essential since Qatar will need renewable sources of wealth creation to generate income and support consumption after its hydrocarbon reserves are depleted. Economic diversification is a common thread in the strategy of many resource-rich countries, but success has been elusive for many and has come only gradually for others. Some countries target priority sectors and try to direct resources to them. Others invest in an enabling environment that encourages investment and creates opportunities for the private sector to branch into new areas. Many countries follow a mix of both approaches.

Diversifying the domestic output base is not a stroke-of-the-pen shift. Entrepreneurship and innovation need to be learned, embedded in the education system and in the surrounding culture and supported through business friendly policies and regulations. Qatar's private sector will need strengthening, with support and incentives that encourage acquiring relevant capabilities and participating in a wide range of economic activities.

Taking stock of the hydrocarbon legacy

Qatar's dependence on oil will continue to decline even if production rates are sustained by investments in enhanced and incremental oil recovery.

Qatar's reliance on gas exports is set to continue. But extraploating today's production and cost parameters far into the future would be hazardous. While they may provide a reliable guide for the next 25 years, feasible production rates thereafter may be lower, and costs could be higher. Beyond the expiry of existing purchase and sales agreements, the commercial value of distant future deliveries is also uncertain. While Qatar's gas wealth is considerable, given these uncertainties and the lengthy process of economic discovery entailed in broadening the country's economic base, Qatar has good reasons to act now.

Investing hydrocarbon income in foreign assets is one important avenue for diversifying Qatar's income. But relying exclusively on foreign asset income would not constitute a viable, long-term development strategy. It would create new types of risk, for example, leaving Qatar exposed to the vicissitudes of international capital markets, and it would not address Qatar's ambition to become an inquiring, innovative and creative society. A more diversified domestic economic base, in which knowledge activities play a prominent role in generating productive and remunerative jobs, is necessary to expand capabilities and support wider societal objectives.

Because a diversified economy takes decades to establish, the process should get under way now. Identifying competitive advantages, acquiring new capabilities and developing new product lines and market links all require a long period of experimentation, discovery and learning.

Tackling the challenges

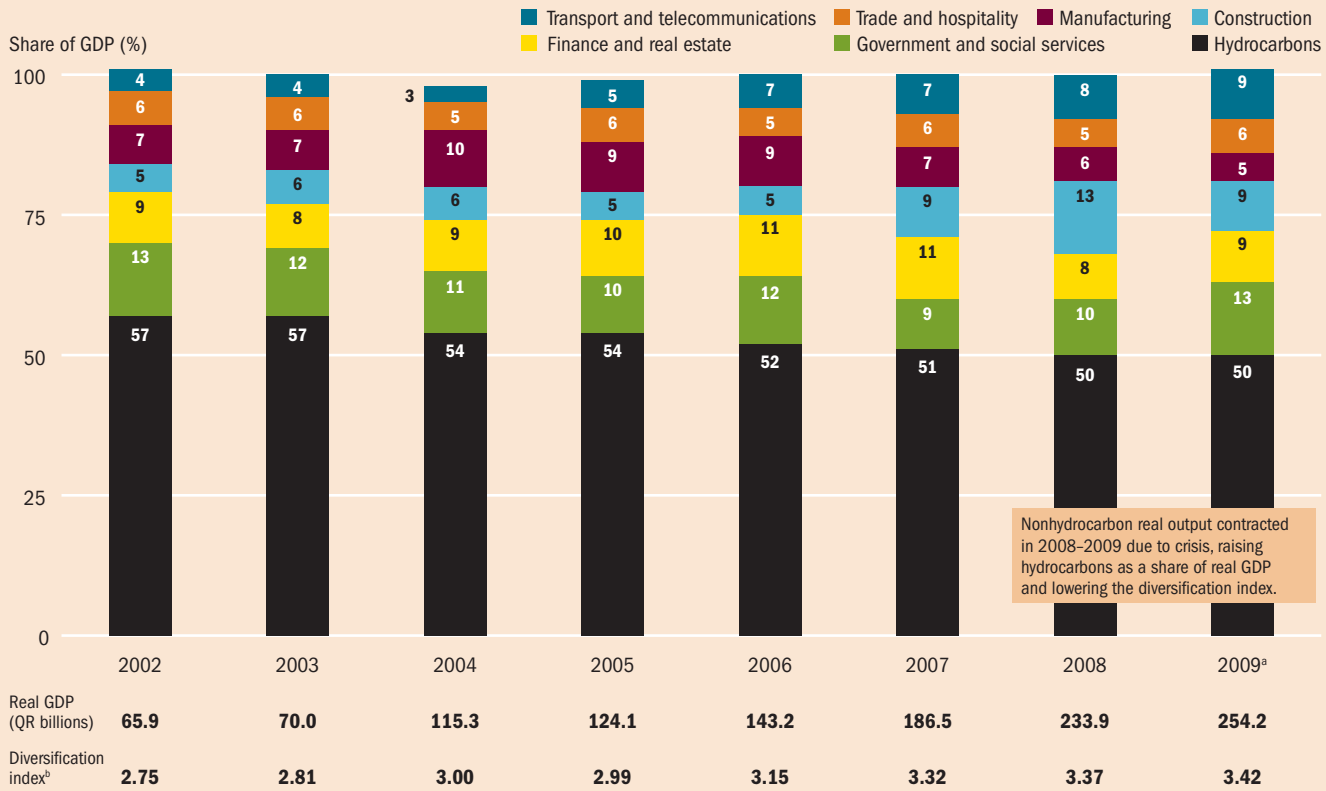
The absence of a ready formula for diversification means that Qatar will have to develop a more

varied economy through economic discovery. To date, the capacity for discovery has not generated significant results. Little by way of diversification of output has occurred over the last decade (figure 3.10). A study of new exports from Qatar reveals that only 41% survive one year after their introduction (figure 3.11).

Moreover, the scope of Qatar's exports is limited, especially when compared with that of successful outward-looking economies. Singapore, for example, exported a diverse array of about 4,590 separate products in 2008, compared with about 1,630 from Qatar, 98% of them (in value terms) linked directly to hydrocarbons or such energy-intensive industries as metallurgy. In various surveys, few Qatari businesses report plans to expand beyond core businesses or move to the next level in the value-adding chain.

Often new product introduction grows out of research efforts. Today, Qatar has only a small pool of scientists, engineers and technical workers. The path-breaking work of the Qatar Science and Technology Park as a "research accelerator" demonstrates great promise. But this experiment is still in its infancy, and even with opportunities for quick commercial wins, creating a research culture and forging links back to the wider economy will take time. Basic research initiatives under the Qatar National Research Fund have started, but there is normally a substantial lag between university research and the development of commercially viable propositions.

Figure 3.10 Little diversification of output has occurred over the last decade



a. Based on growth for hydrocarbons and nonhydrocarbons as per International Monetary Fund Article IV from 2008 levels.

b. Inverted Herfindahl-Hirschman Index for key economic sectors.

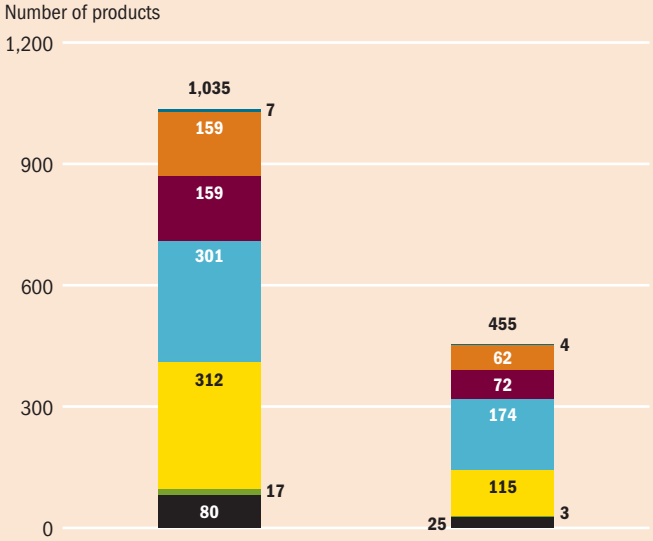
Note: Sectors are regrouped for uniformity across countries.

Source: International Monetary Fund (IMF) Qatar Article IV report and Statistical Appendix January/February 2010.

To diversify, Qatar must overcome several interrelated challenges:

- Entrepreneurship is not yet solidly established in Qatar. Small and medium-size enterprises constitute a fledgling part of the economy. Despite the success of a relative handful of companies such as iHorizons, the sector is considered weak. Fewer than 40% of the existing small and medium-size manufacturing enterprises were established after 2000.
- Qatar's domestic economy is too small to attract significant foreign investment focused on internal markets, and smallness also limits the economy's usefulness as a training ground for local companies hoping to expand regionally or globally.
- Geography imposes limits. Qatar is poorly connected to its hinterland in the Gulf Cooperation Council countries and is a three-day trip from major international sea lanes.
- Qatar's development model, with a low-wage private sector coexisting with a high-wage public sector, limits opportunities for Qataris and provides little incentive for investment in homegrown capabilities. Labour productivity is falling across most sectors (figure 3.12).
- Like other natural resource–rich countries, Qatar is vulnerable to underlying pressures for real exchange rate appreciation, making its exports more costly and less competitive—the economic pathology known as Dutch disease (figure 3.13).

Figure 3.11 Only 41% of new products exported from Qatar survive until the next year



Survival rate, 2005–2007

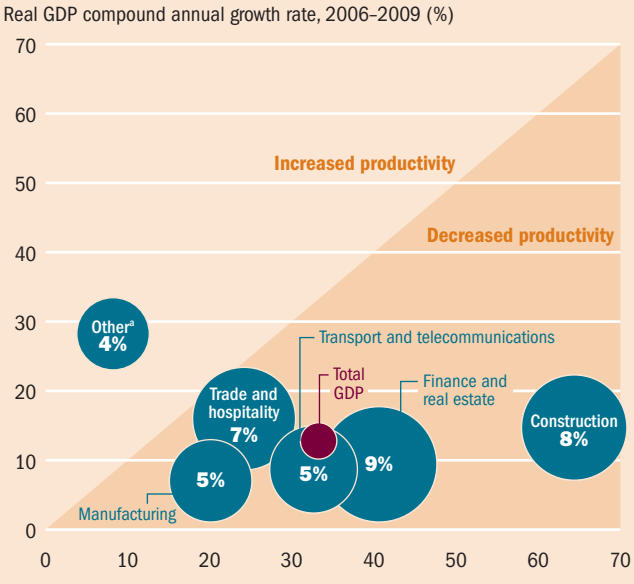
Hydrocarbon	55%
Hydrocarbon derivatives	39%
Metallurgy	43%
Machinery and precision instruments	54%
Other manufacturing products	33%
Other mineral products	39%
Other	31%
Total	**41%**

Source: UN COMTRADE database and International Trade Centre Trade Map database.

Finding the best approaches for Qatar

Diversifying Qatar's economy will require collaboration between the state and the private sector, each focusing on what it does best. Deciding on

Figure 3.12 Labour productivity is falling across most sectors

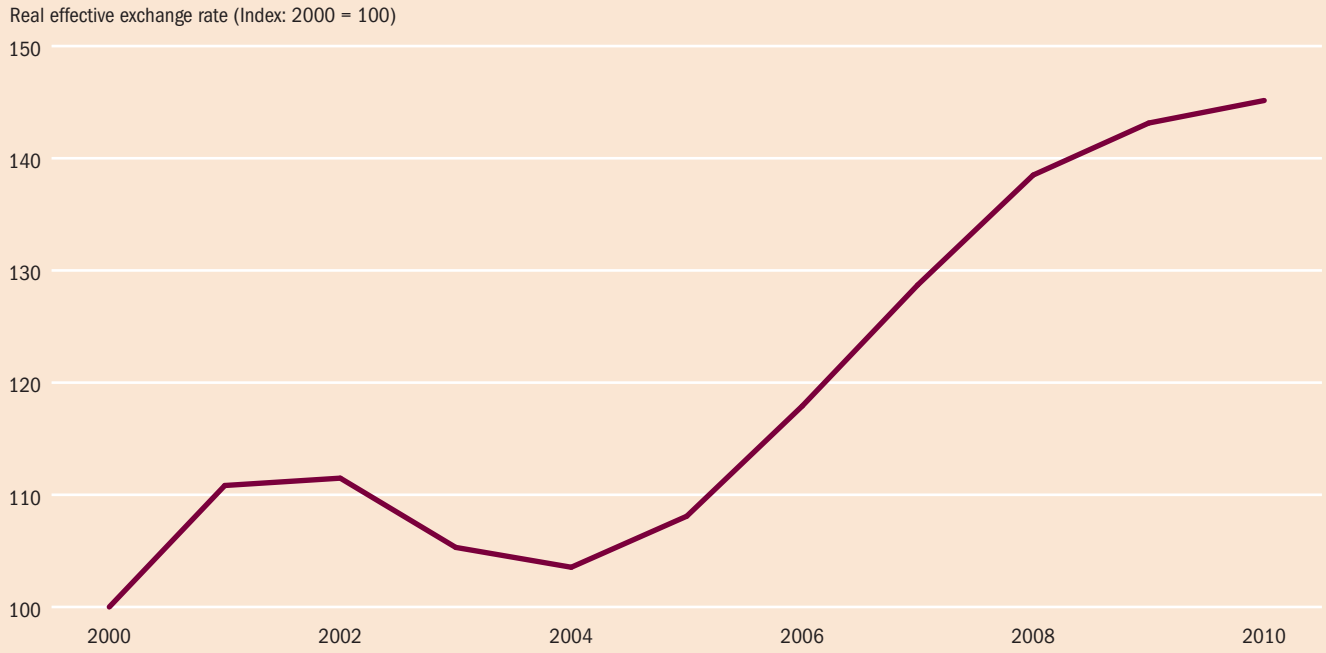


a. Includes agriculture, fishing and utilities. Productivity growth is due mainly to agriculture and utilities that are subsidized by the government.

Note: Size of bubble indicates the relative size of the sector as a percentage of GDP in 2009.

Source: National Development Strategy 2011–2016 estimates.

Figure 3.13 Qatar is vulnerable to underlying pressures for real exchange rate appreciation, making its exports more costly and less competitive



Source: Institute of International Finance (IIF) Data Retrieval database.

business investments is best left to those who understand the relevant markets, production systems and value chains and to those who are putting their capital at risk. But only government can regulate in the public interest, determine policy direction and orchestrate the exploitation of Qatar's hydrocarbon wealth and the use of the financial resources hydrocarbons create. Given existing private sector weaknesses, government will also play an important role in spearheading the development and growth of private sector capabilities, through financial support and other means. But government has to guard against featherbedding an inefficient private sector or undermining incentives for high performance. Government must also promote a level playing field for the private sector, avoiding practices that give state-linked entities an unfair advantage. Box 3.3 summarizes design principles that can guide state support for industry and the private sector.

Setting the national diversification agenda

Qatar is not alone in seeking a broader economic base. Other natural resource–based economies around the world have tried and are trying to reach a similar outcome. Among Gulf Cooperation Council countries, Bahrain and Saudi Arabia are working on strategies for encouraging more diverse economies. Abu Dhabi also has a comprehensive plan.

The fact that other countries are pursuing diversification strategies creates opportunities for cross-country learning. But there are also risks. Many of the Gulf Cooperation Council countries are focusing on diversification in the same areas, including petrochemicals, air transport, logistics, real estate, knowledge services, finance, life science and telecommunications. Depending on how these strategies evolve, the Gulf countries face the risk of channelling resources into the same sectors, with each country falling short of achieving an efficient scale of production.

Qatar, like other countries seeking diversification, will build on areas of existing and emerging strengths and clear potential. But beyond these

Box 3.3 Calibrating government involvement in industry

Because government support will be needed—even for funding certain start-up activities—guidelines should be adopted to prevent lasting distortions or government-funded failures. The following design principles can help guide government actions in support of private sector development:

- Provide incentives and subsidies only to truly new activities, which would face information and coordination challenges that markets alone would not solve.
- Set development targets that can be monitored.
- Build in automatic sunset clauses for ending state support.
- Target specific economic activities not entire sectors.
- Subsidize activities with clear spillover effects and demonstration value.
- Place authority for carrying out industrial policies in agencies with demonstrated competence.
- Place involved agencies under the authority of a high-level political authority to ensure commitment and accountability.
- Make sure that implementing agencies maintain channels of communication with the private sector.
- Understand that failures are possible since it is impossible to eliminate all risks or bring in all relevant information.
- Enable activities to renew themselves so that the cycle of discovery can continue.

These principles have been identified and distilled from cross-country experiences in East Asia and Latin America by economist Dani Rodrik as common success factors associated with state support for economic discovery.

areas, Qatar will focus primarily on building capabilities in the private sector and on supporting efforts to lift productivity growth across the whole economy.

Actions to open the economy, streamline rules and strengthen the legal framework for enterprises support the broader diversification goal. For example, government has enacted a series of laws affecting banking, customs and commercial law—all of which help establish a predictable environment for doing business. The government also has liberalized the laws governing foreign direct investment, allowing majority foreign ownership in such sectors as agriculture, manufacturing, health and mining. Although foreign investment outside the hydrocarbon sector remains meagre, the enabling conditions for growth are being created.

Other steps support the diversification drive. Three major industrial cities—Dukhan, Mesaieed and Ras Laffan—house a mix of energy-related industries. The anticipated establishment of special economic zones offering high-level infrastructure services and freedom from regulatory and other burdens is expected to stimulate new investment.

Many separate initiatives are already under way. It is important to take them into account, link them where possible and address gaps that may undercut future success. A variety of institutions will be engaged in Qatar's diversification drive. These include Enterprise Qatar; the Qatar Foundation, which houses the Qatar Science and Technology Park; the Supreme Council of Information and Communication Technology; Qatar Financial Centre; and Qatar Development Bank. The broad roles expected of these institutions in spearheading Qatar's diversification efforts are identified below in the context of their own mandates and strategies.

To accelerate the diversification agenda, the government will address the constraints that impede economic discovery and the birth of new economic activities. The government fully recognizes that to stimulate investment it must ensure macroeconomic stability, regulatory efficiency and coherence, and effective delivery of infrastructure services (all examined above). In addition, the push to build a more diverse economy will require special attention to four areas that frustrate innovation and enterprise start-ups: low demand for skills

amid surplus labour, a weak private sector and low levels of entrepreneurship, limited capabilities of discovery and innovation, and weak regional integration and connectivity.

Creating demand for skills and high-wage jobs

Qatar's low demand for skills emerges as a critical factor limiting opportunities within a more varied economy. Emphasizing production based on low-wage, low-productivity labour and following a development model dependent on highly labour-intensive production methods in the property and infrastructure sectors have created obstacles to an economy driven by innovation and knowledge-based services. Today, a low-wage private sector closes off opportunities to Qatari citizens. As a result, many seek positions in the public sector, taking jobs where their potential may not be fully realized.

Breaking out of the current low-wage configuration may raise costs in the short run and will require adjustments that may be difficult. But over the longer term dynamic efficiency gains and the accelerated productivity growth that follows will more than compensate for any rise in costs and will create incentives for innovation and the acquisition of knowledge. Supply-side investments alone will be insufficient. Through modern education and training, citizens might qualify for successful careers in a knowledge-oriented economy. But possessing those skills does not guarantee that there will be jobs—particularly if employers can still orient their recruitment and production strategies around the availability of a large pool of cheap, unskilled immigrant workers.

For its part, the private sector operates with the distortions that flow from labour policies. Some firms focus on earning rents from leasing workers or collecting fees from businesses that are owned locally but operated by foreign lessees. The options of building low-risk business around these types of activities leave little incentive to invest in more demanding, riskier enterprises that would have greater benefits for the larger economy.

The presence of a pool of cheap labour creates a bias towards labour-intensive technologies that provide few opportunities for discovery or productivity advances. Only when cost structures change will businesses want to invest in new, less labour-intensive production methods and will job-seekers alter their expectations. Each of these shifts will nurture the other, but the larger economic transformation is likely to take a generation or more. To expand quality opportunities for Qataris, and to reverse the factors retarding productivity growth, the government will review policies that might have fostered dependence on low-wage, low-skilled labour (see chapter 5 for targets on labour markets).

Strengthened private sector and entrepreneurship

A strong culture of private sector initiative is normally characterized by a robust layer of small and medium-size enterprises. Qatar's small and medium-size enterprise sector is underdeveloped, constituting about 15% of the economy, with most firms focused on the domestic economy.

Enterprise Qatar, an early initiative linked to *QNV 2030*, will provide a focal point for stimulating services for small and medium-size enterprises. Its programme will be performance based, catalysing the delivery of services by the private sector to small and medium-size enterprises through vouchers and targeted grants. Business skills development, incubation, marketing and other services would be supported. Enterprise Qatar will also share risks with the private sector, through support for guarantees and participation in equity. Although no sector would be excluded from its support, it will direct its energy towards knowledge-intensive businesses, focusing particularly on developing entrepreneurial skills among young Qatari men and women. Enterprise Qatar is expected to open for business early in 2011.

The Qatar Development Bank is cultivating a new portfolio of financial and business support services to encourage private sector development, including a renewed drive to support small and medium-size enterprises in targeted sectors. It has also

created an export promotion function to expand the private sector's space and market share. It is expected, too, that the Qatar Development Bank will partner closely with Enterprise Qatar and with the Qatar Science and Technology Park in a variety of enterprise and knowledge business initiatives.

The Ministry of Business and Trade is working with the World Bank to identify and implement improvements in the climate for doing business in Qatar. Challenges exist within the ministry and in other agencies in supporting implementation. It is important to establish clear precedence among objectives and to consider the readiness of people and systems for any proposed changes.

Privatization can be an important pathway for developing private sector capabilities, but to contribute to a supportive ecosystem, it must go beyond divesting equity from state-controlled companies. Increasingly, privatization initiatives will be designed to build competitive strengths through acquisition of knowledge, technology, management skills and operational expertise.

The government, for its part, will endeavour to boost small businesses through changes to procurement and outsourcing rules that will reduce onerous transaction costs. One problem in Qatar today is the heavy working capital requirements needed to meet bidding bond regulations. These requirements are particularly difficult for small companies to meet. Qatar's agreement under the General Agreement on Trade in Services allows for favourable treatment within transparent procurement procedures to support the development of local enterprise.

Targets for 2011

- Make Enterprise Qatar operational.
- Introduce new products and services from the Qatar Development Bank that enhance its reach and relevance.

Target for 2012

- Reform government procurement regulations to reduce burdens on small business.

The efforts needed to drive progress in these areas should not be underestimated. Moving from concept design and strategy to business models that will gain traction requires experience combined with knowledge of local market needs and demands. Both Enterprise Qatar and the Qatar Development Bank will need to recruit and retain qualified and experienced finance and business professionals. Other goals will need legislative changes, which will require effective advocacy.

Increased capabilities for innovation, skills and discovery

Succeeding in a knowledge-based economy entails moving beyond improvements in existing production. New product lines, applications and connections are necessary in an environment where technology firms, innovation institutes, research and development centres and corporate innovation units are all looking for ways to create genuinely new products and services that potential customers will value.

Patents, one way of measuring a society's level of innovation and discovery, show significant space for improvement. Over the past five years Qatar has filed about 14 patents annually, compared with more than 5,000 for such countries as Norway and Singapore.

Qatar is committed to advancing research and development and has targeted 2.8% of GDP to support research. Research institutions have launched potentially important initiatives. The Qatar National Research Fund is now in its fourth round of funding activities, but no centralized body is responsible for planning and coordinating national research and development activities. The government will prepare a national research and development strategy to better guide the development of technology and knowledge-intensive businesses and to promote technology and knowledge transfer. Among other things, the research and development strategy would set high goals for research.

Target for 2013

- Develop a national research and development strategy and linked technology transfer strategy.

The Qatar Foundation spearheads Qatar's efforts to become a knowledge society. Its functions include expanding access to education among citizens, supporting the development of knowledge-based enterprises and funding research and development activities in universities, industry and the public sector. The Qatar Foundation is also active in other ventures, particularly in health.

Within the Qatar Foundation, the Qatar Science and Technology Park provides an environment for collaboration among firms and across traditional research boundaries to produce innovative solutions and to develop their commercial application. It also houses an initiative to promote knowledge based businesses—businesses whose assets reside in knowledge and information rather than in the physical product space. Together with the Qatar Development Bank and General Secretariat for Development Planning, the Qatar Foundation will pioneer an incubator programme for knowledge businesses. This will combine the development of top-down strategy with bottom-up pilot projects that could be funded by the Qatar Development Bank, Qatar Foundation, Enterprise Qatar and the Supreme Council of Information and Communication Technology. Because the state will have an important role as an investor, customer and regulator, a public-private partnership structure will be needed to forge progress. The form of this structure and related governance and funding arrangements will be worked out based on learning during the pilot stage.

Target for 2011

- Establish an incubator for knowledge businesses at the Qatar Science and Technology Park.

Target for 2013

- Establish a public-private partnership framework to support development of a knowledge-based business sector.

Enhancing information and communication technology for economic development

The Supreme Council of Information and Communication Technology (ictQATAR) will actively leverage information and communication technology (ICT) to support the realization of Qatar's national development goals and position Qatar as a leading knowledge economy enabled by ICT by 2015. A plan developed by ictQATAR identifies three strategic thrusts. The first thrust will entail initiatives to encourage the government and key economic sectors to use ICT innovatively and to provide the people and businesses of Qatar with the skills and awareness needed to fully participate in the digital society. The second thrust will continue to build a sustainable ICT ecosystem, creating a local ICT talent pool and identifying business opportunities involving digital content. The third thrust will provide affordable, high-speed and secure ICT infrastructure to serve the needs of the economy and society. To support these initiatives, ictQATAR has identified detailed projects that are well aligned with broader national development strategy goals.

Target for 2011–2016

- Approve and execute the Supreme Council of Information and Communication Technology's strategy.

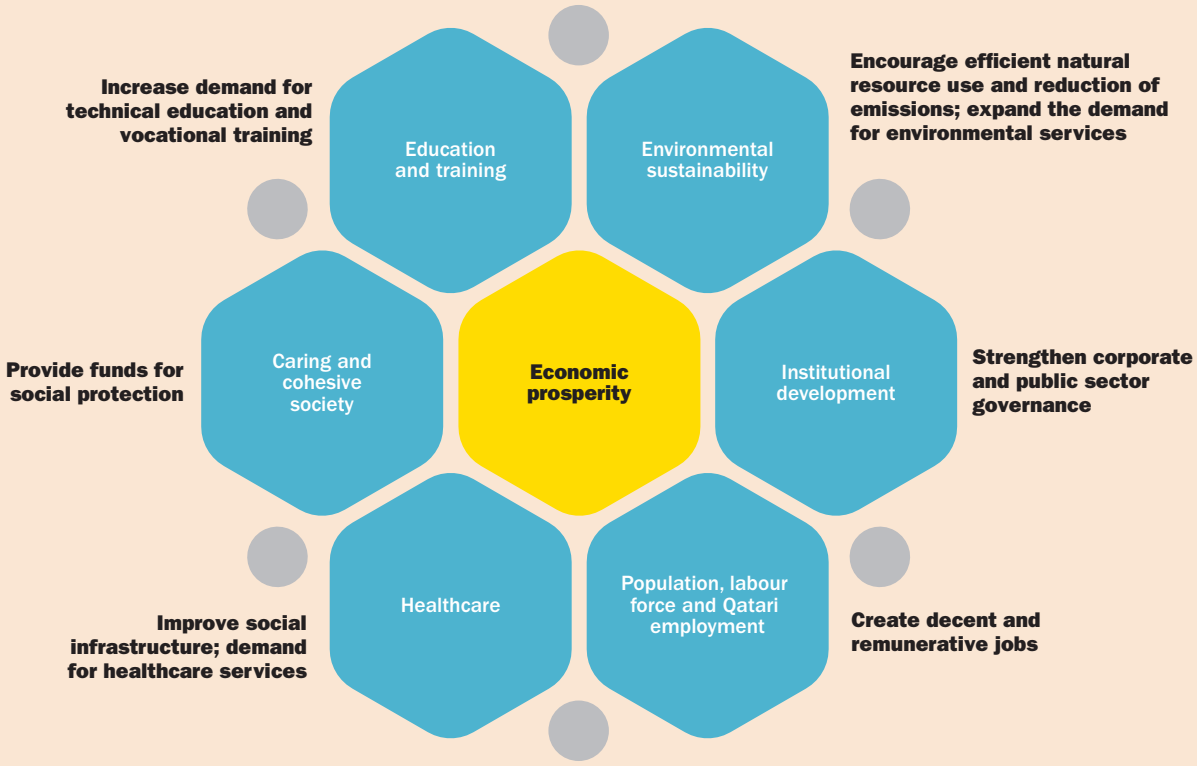
Expanded financial sector activities

The Qatar Financial Centre is supporting the development of Qatar's financial industry. In addition to providing a window for international banking and investment in Qatar and in the region, it is focusing on developing capabilities in markets for asset management, re-insurance and captive insurance. In a developmental capacity, it has established the Qatar Financial Business Academy, which provides products and services to strengthen capabilities in the financial sector and in the general business community.

Figure 3.14 Economic prosperity is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for economic prosperity

Economic prosperity as an enabler for other sectors



Target for 2011–2013

- Implement Qatar Financial Centre's strategy, and scale up the activities of the Qatar Business Financial Academy.

Realizing the benefits of regional integration

Countries in many parts of the world have realized benefits from regional integration. By freeing the movement of goods, services, technologies and people across borders, they have created integrated economic spaces, enabling firms to reach larger markets and generate production efficiencies that would have been impossible if they had remained fenced inside their own economies.

Economically integrated regions are more attractive to foreign investors who are more inclined to open a production or distribution facility if it serves a bigger regional market. Often, local firms first develop an export orientation within a region before reaching out to more distant global markets. Qatar's small domestic market may fail to offer adequate learning opportunities or the scale needed for efficiency.

Qatar, a member of the World Trade Organization, operates a relatively open economy. However, stronger cooperation among Gulf Cooperation Council countries can contribute to greater economic efficiencies and improve the potential for diversification. Gulf Cooperation Council countries are creating a number of overlaps in energy-intensive areas such as petrochemicals, steel and aluminium. Ethylene plants are going up in three neighbouring countries. The potential for building overcapacity is strong. Competition is also evident in financial services, air transportation, tourism and education.

Cooperation and pragmatism offer clear benefits. There may be situations where Qatar could improve its returns by investing in a neighbouring country rather than creating underutilized capacity at home. Likewise, other Gulf Cooperation Council countries may wish to look at opportunities emerging in Qatar before adding to their own capacity.

Harmonizing regulations and laws offers benefits across a wide spectrum (including, for example, labour and finance). Coupled with lower tariffs and reductions in other formal trade barriers, such steps could spur investment and trade within the region and support common efforts for a more diverse and efficient regional economic base.

Cross-border infrastructure can be important in realizing the benefits of a more integrated and enlarged economic space. The border between Qatar and Saudi Arabia is served by just one road-crossing. A combination of inadequate connective infrastructure and cumbersome border and customs procedures raises the costs of trade and crimps efficiency.

Shared infrastructure also offers benefits. A regional rail network connecting Gulf Cooperation Council countries would be a significant advance in connectivity. A modern fibre optic network in the Gulf Cooperation Council, also under study, would support knowledge-based sectors throughout the region. And a regional power grid, which could support power transmission along high-voltage direct-current cables, would promote wider opportunities to capitalize on energy assets.

* * *

As with the other pillars of *QNV 2030,* sustaining economic prosperity requires mainstreaming economic initiatives across sectors and institutions, just as those sectors and institutions will contribute to sustaining economic prosperity (figure 3.14).

Chapter 4 considers in more detail some of the themes introduced here. Developing the capabilities that will equip Qatar to sustain its economy and society is one important theme. Another is understanding how the operation and regulation of the labour market serve Qatar's wider development interests.

Chapter 4

Promoting human development

4 Promoting human development

"The National Vision aims at transforming Qatar into an advanced country by 2030, capable of sustaining its own development and providing for a high standard of living for all of its people for generations to come."
—Qatar National Vision 2030

The human development pillar of *Qatar National Vision 2030 (QNV 2030)* calls for the "development of all [Qatar's] people to enable them to sustain a prosperous society" and "to meet the needs of this generation without compromising the needs of future generations". Qatar will continue to invest in its people so that all can participate fully in the country's social, economic and political life and function effectively within a competitive knowledge-based international order. It is putting in place advanced health and education systems that meet the highest global standards. It is also supporting the productive participation of Qatari men and women in the labour force, while attracting qualified expatriate workers in all fields, with a growing emphasis on the higher skilled.

The notion of human development gained prominence 20 years ago, when Mahbub ul Haq, lead author of the United Nations Development Programme's first *Human Development Report,* called for a new approach to development economics, putting people, not production, at the centre. That first report called for moving beyond such narrow measures of progress as gross national income per person, then the main yardstick for development. While accepting the importance of income as an indicator, the human development index added measures of life expectancy, to capture improvements in health, and measures of school enrolment, to capture improvements in knowledge—creating a new composite indicator of progress in health, education and income.

How does Qatar fare on the global human development index? With a score of 0.803, it ranked 38th in the world in 2010, in the group of countries with "very high" human development. Its gross national income is among the world's highest. Its life expectancy at birth is 76 years, approaching the 81 years of Norway. Its expected level of schooling, however, is 12.7 years, well below the 15–20 years of other very high human development countries.

The National Development Strategy 2011–2016 identifies the challenges in health, education and productive work. It also presents plans for meeting those challenges by fostering a healthy, long-living population, building world-class knowledge and skills and producing a capable and motivated workforce.

Under the leadership of the Supreme Council of Health, Qatar will develop an integrated healthcare system that is managed to world-class standards, is accessible to the entire population and offers services through public and private institutions. A national health policy will set and monitor standards for the social, economic, technical and administrative aspects of healthcare and for effective and affordable services in accord with the principle of cost-sharing partnerships. The healthcare system will help all people in Qatar live longer and healthier lives. Preventive and curative care will take into account the differing needs of men, women and children. High-quality research will focus on public health, biomedicine and clinical effectiveness.

Also, under the leadership of the Supreme Education Council, Qatar will build a modern, world-class education and training system that provides a first-rate education comparable to that offered in the best schools, universities and technical colleges in the world. That system will incorporate programmes that encourage analytical thinking, creativity, innovation and entrepreneurship, while promoting social cohesion and respect for Qatari values. The system will provide opportunities for students to develop their full potential and prepare them for success in a world with ever-greater technical requirements. It will raise performance at all levels and offer pathways for education and training beyond the secondary level, including for lifelong learning. It will also expand the capacities of professional staff.

Finally, under the leadership of the Ministry of Labour, Qatar will expand the capabilities of the labour force, preparing it to move from a hydrocarbon economy to a diversified knowledge economy led by the private sector. Qatar will encourage satisfying and remunerative employment in high value-added sectors, aligning economic objectives with the social priority of preserving national identity. Labour market reforms will foster a productive labour force and encourage more Qataris to work in the private sector. For the foreseeable future, however, Qatar will not have enough citizens to meet the expanding requirements of a rapidly growing, diversifying and technologically advanced economy. To counter this shortfall, Qatar must attract and retain expatriates with the right mix of skills.

Nurturing a healthy population

"To improve the health of Qatar's population, Qatar aspires to develop an integrated system for healthcare, managed according to world-class standards. This system will meet the needs of existing and future generations and provide for an increasingly healthy and lengthy life for all citizens. All health services will be accessible to the entire population."—Qatar National Vision 2030

People are a country's most valuable asset. The human development pillar of *QNV 2030* calls for investing in and developing all of Qatar's people, enabling them to participate fully in economic, social and political life and contribute to sustaining a prosperous society. A key element of that human development pillar is health. A healthy population served by a world-class, well managed healthcare system available to all is essential to Qatar's development.

The importance of an effective healthcare system is enshrined in Qatar's Permanent Constitution: "The State shall foster public health; provide means of prevention from diseases and epidemics and their cure in accordance with the law." Advancing healthcare is central to the larger vision for sustainable growth and opportunity. For individuals, health and wellness contribute vitally to quality of life. For society, a healthy population reduces social costs and enhances economic competitiveness.

Through the National Health Strategy 2011–2016, under the guidance of the Supreme Council of Health, Qatar will enhance the wellness of all its people and establish a vibrant, healthy and productive society—for today and for the future. This is Qatar's first comprehensive National Health Strategy and is the culmination of months of extensive discussion, debate, consultation, research and deliberation. The positive and unprecedented engagement of multiple healthcare and intersectoral stakeholders reflects a new momentum and genuine desire for reform that is in the best interest of the country.

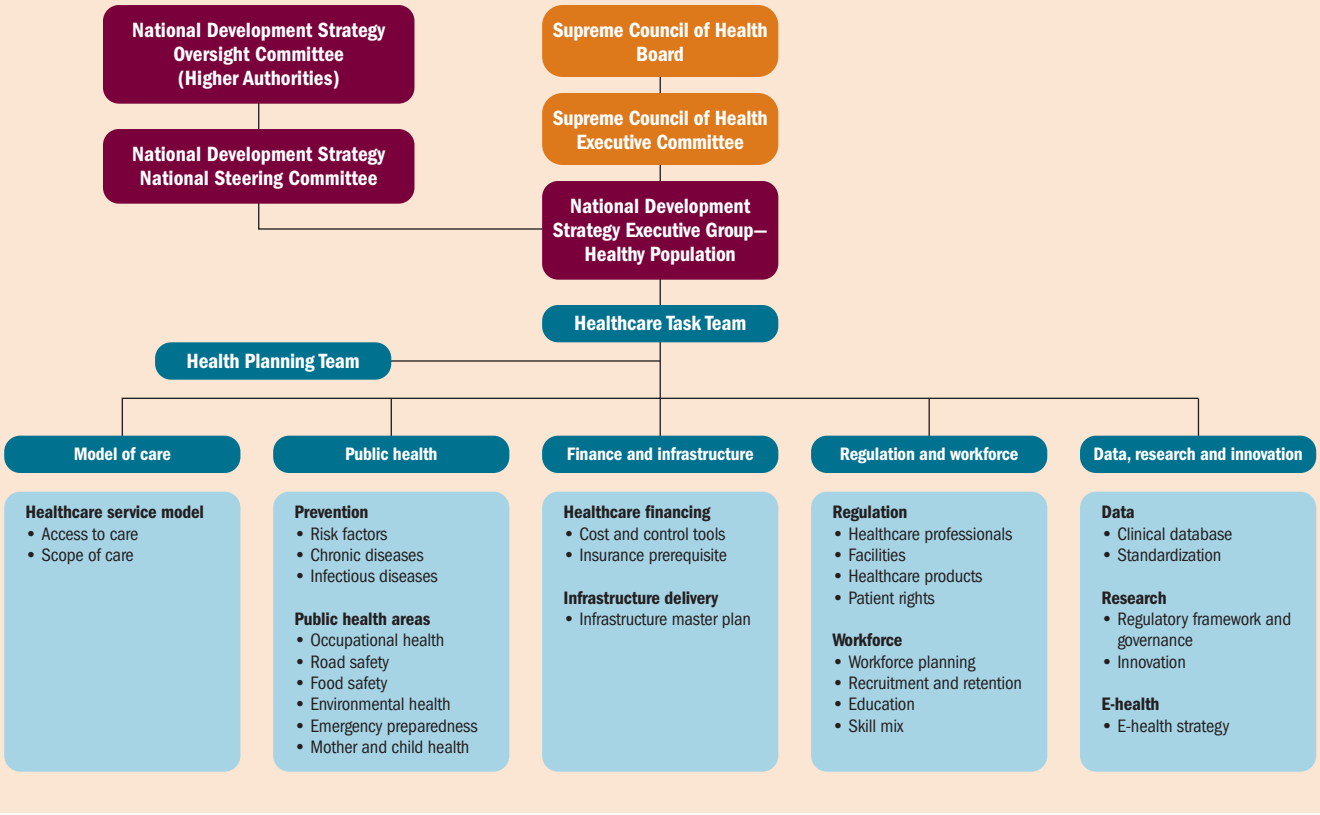
The National Health Strategy, which builds on the Supreme Council of Health's *Qatar National Health Vision 2020: Caring for the Future—Establishing a Healthy, Vibrant Society,* incorporates a situational analysis of the current state of the sector, strategic recommendations and implementation reports. The situational analysis identified the priority areas using baseline analyses of Qatar's healthcare system and benchmarking them against relevant best practices in other countries, both regional and global. The implementation report outlined initiatives and activities to support each recommendation, including core requirements, responsibilities, timelines and key indicators.

With extensive stakeholder engagement, through both individual interviews and multiple team interactions as outlined in figure 4.1, development of the strategy was led by the Supreme Council of Health, with coordination support from the General Secretariat for Development Planning. The Executive Group for Healthy Population provided oversight. The Healthcare Task Team, consisting of senior healthcare professionals, was the decision-making body and validated findings and recommendations. The Health Planning Team met weekly to validate hypotheses from the situational analysis and to provide guidance on strategic recommendations and implementation plans. Sub-Task Teams were grouped by the five following major thematic areas: Model of Care, Public Health, Finance and Infrastructure, Regulation and Workforce, and Data, Research and Innovation. These sub-Task Teams met regularly to discuss and deliberate on key issues.

The strategy reflects the aspirations of Qatari citizens and residents and the resolve of their political leadership. Qatar is committed to building an integrated healthcare system that meets the needs of its population. In addressing known risks, providing treatment, preventing disease and maintaining wellness, Qatar will support the long-term objectives of *QNV 2030.* The far-reaching effort is a crucial part of the human development pillar.

The National Health Strategy provides a practical and realistic guide for reforms, with far-reaching

Figure 4.1 Links between the National Development Strategy 2011–2016 and the Supreme Council of Health



and fundamental changes envisioned across the entire healthcare system. It seeks to improve health outcomes by establishing a world-class healthcare system with effective and affordable services for the entire population. The system will provide a full continuum of care through a patient-centred approach, addressing both physical and mental health needs. The system will encourage prevention but ensure the availability of evidence-based curative healthcare services. High-quality services will be offered through public and private institutions operating under the direction of a national health policy that sets and monitors standards for social, economic, administrative and technical aspects of healthcare. High-calibre research will be directed at improving effectiveness and quality.

Universal access to the needed levels of healthcare remains a cornerstone for the Supreme Council of Health and its six guiding principles while inspiriting *QNV 2030:*

First, focus on people, with policies and care designed to meet the needs of all people living in Qatar, through a carefully balanced and fully integrated model of high-class service delivery.

Second, enable people's full potential, by concentrating on improving physical and mental wellness. Success will be measured by reliable performance indicators. Policies will encourage and empower the people of Qatar to take more responsibility for their own health.

Third, ensure sustainability, through sound fiscal leadership and stewardship to obtain the greatest health gain for money spent.

Fourth, stimulate continuous excellence and innovation, through positive competition to improve efficiency, quality and patient satisfaction.

Fifth, base health policies and services on the latest scientific research and evidence. The Supreme

Council of Health will encourage medical research at the frontiers of science in Qatar's centres of excellence while conducting high-quality health services research itself, including collecting appropriate data to guide policy and monitoring and evaluating progress against specified objectives.

Sixth, achieve the highest quality and safety, promoted by an environment that expects and supports international benchmarking to continuously monitor, evaluate, and improve quality and safety in all aspects of Qatar's healthcare system.

The National Health Strategy defines the projects and related targets for achieving the seven ultimate goals for the health sector:

Build a comprehensive world-class healthcare system by shifting the balance of care towards a preventive and community-based model focusing on the patient and providing a full continuum of care anchored on a capable primary care system.

Establish an integrated system of high-quality healthcare through effective use of information, communication and process improvements.

Embed prevention and early detection into all facets of the system and empower people to participate actively in wellness, care and disease prevention to help shift the system from a focus on treating the acutely ill to addressing chronic diseases and their underlying risk factors.

Recruit, retain and educate a high-quality workforce—a modern, learning and supported workforce—and overcome the constraints posed by a shortage of healthcare professionals.

Establish a robust policy and regulatory framework to guide the health sector and ensure quality and accountability.

Coordinate the planning and control of healthcare infrastructure and finance to ensure effective and affordable services based on the principle of partnership in cost sharing.

Support high-quality research for improving the effectiveness and quality of healthcare through continuous knowledge-led innovation and research.

The case for reform is compelling and commands the full commitment of Qatar's leadership. The availability of financial resources and the manageable size of the country, coupled with reform efforts already under way, create the opportunity to build a system that will provide the population with safe and effective healthcare and help them lead long and healthy lives. The recommendations to achieve these outcomes are the fundamental building blocks of a modern healthcare system and deserve priority and full support. Not all of the proposed objectives and activities are new. Some have been discussed or recommended before, and some are already under way. However, implementation is more crucial now than ever.

Challenges for healthcare

To achieve the *QNV 2030* goals for the health sector, Qatar needs to overcome multiple challenges:

An imbalanced model of care, which must shift from hospital-based care to delivery of a full continuum of care by enhancing primary healthcare and community-based services, while ensuring that acute care services meet the needs of the population.

Limited national integration, quality guidelines and performance monitoring.

Morbidity and mortality patterns that reflect a high prevalence of noncommunicable diseases, including chronic diseases and diseases linked to lifestyle and behaviour, as well as a high rate of injuries, primarily from road traffic accidents and workplace-related incidents.

Rapidly increasing and fluctuating population, with a large influx of single male workers, increasing demands on the healthcare system, accentuating the mismatch between healthcare needs and the current system.

Shortages in a high-quality workforce across the sector, with ineffective recruitment and retention strategies.

A regulatory and policy framework, which must be strengthened to ensure effectiveness and efficiency throughout the healthcare system.

Underlying all the key healthcare needs in Qatar are behaviour patterns that should be addressed through a strong preventive approach and a robust primary care system. A recent government survey identified primary healthcare as the number two perceived public service needing improvement. Qatar's primary care system is strained by the challenges of preventing, monitoring and treating disease. Over the past decade, the number of Primary Healthcare Centres has remained essentially unchanged, while the population has grown threefold.

Studies show that 70% of deaths in Qatar result from chronic illnesses, injuries and congenital diseases. The emerging integrated healthcare system will address these three principal causes of mortality, along with the underlying risk factors.

Chronic diseases account for more than half of deaths. Of particular concern, 16.4% of Qataris suffer from diabetes, well above the global average of 6.4%. This burden of disease—the fourth highest in the world—generates long-term disabilities for those afflicted, as well as high costs for the government. Studies have found high prevalence rates of asthma and cardiovascular disease. The prevalence of other chronic conditions, particularly mental health conditions, is thought to be high as well, but could be underdiagnosed for cultural reasons.

Injuries from roadway and workplace accidents are common among single male workers, who make up about two-thirds of the population. Qatar needs to address the roots of these health risks and those of communicable diseases that tend to increase with a growing migrant population.

The mismatch between healthcare needs and the current system is accentuated by the country's high population growth, with a large influx of single male workers. This has overloaded the system, exacerbating the overemphasis on hospital-based acute care over longer term wellness programmes and disease prevention.

Qatari healthcare spending has risen fivefold since 2001. Population growth is one obvious explanation, but other factors contribute. Improved monitoring and control, with appropriate national healthcare accounting standards and budgeting systems, will strengthen efforts to control costs. A functioning health insurance system could contribute to efficiencies in delivering care, but Qatar first needs to work on the building blocks for such a system.

A workforce plan must be a key component of the country's health strategy, focused on increasing national capacity. Qatar relies heavily on an expatriate healthcare workforce with wide variation in skills; it needs to increase its medical education capacity and motivate more Qataris to pursue professions in all areas of the health system.

Because a quality health system workforce is the critical factor for success, this workforce plan must include a robust recruitment and retention plan that ensures that people with the proper skill set are attracted to professions within the health system.

In recent years, Qatar has modified the governance of its healthcare system several times, but it still needs to strengthen the overall governance, policy, planning and regulatory framework.

Realizing *Qatar National Vision 2030* for a healthy population

To reach the seven goals for the health sector outlined in *QNV 2030,* the government will implement 35 projects, each with clear objectives, outputs and measurable targets. These internationally benchmarked targets will be reviewed and refined as necessary by project owners at the beginning of programme and project implementation.

A comprehensive world-class healthcare system

To deliver integrated services for the country, Qatar's health sector will shift the balance towards a preventive, community-based model of care, focusing on the patient and ensuring access to the right care, at the right time, in the right setting, by the right team. The model will provide a full continuum of care anchored on capable and trusted primary care providers in a healthcare system providing the highest quality standardized diagnostics and treatment (figure 4.2).

Primary care should be the cornerstone of a future people-centred health system. It should be the first medical point of contact, providing appropriate quality health services and acting as a patient advocate throughout a person's journey within the healthcare system. Coordination will be the norm in an integrated healthcare system, with healthcare providers working together to meet patient needs. This will require the design of national programmes for maintaining wellness, managing disease and establishing care pathways across the sector.

Establish primary care as the foundation for healthcare

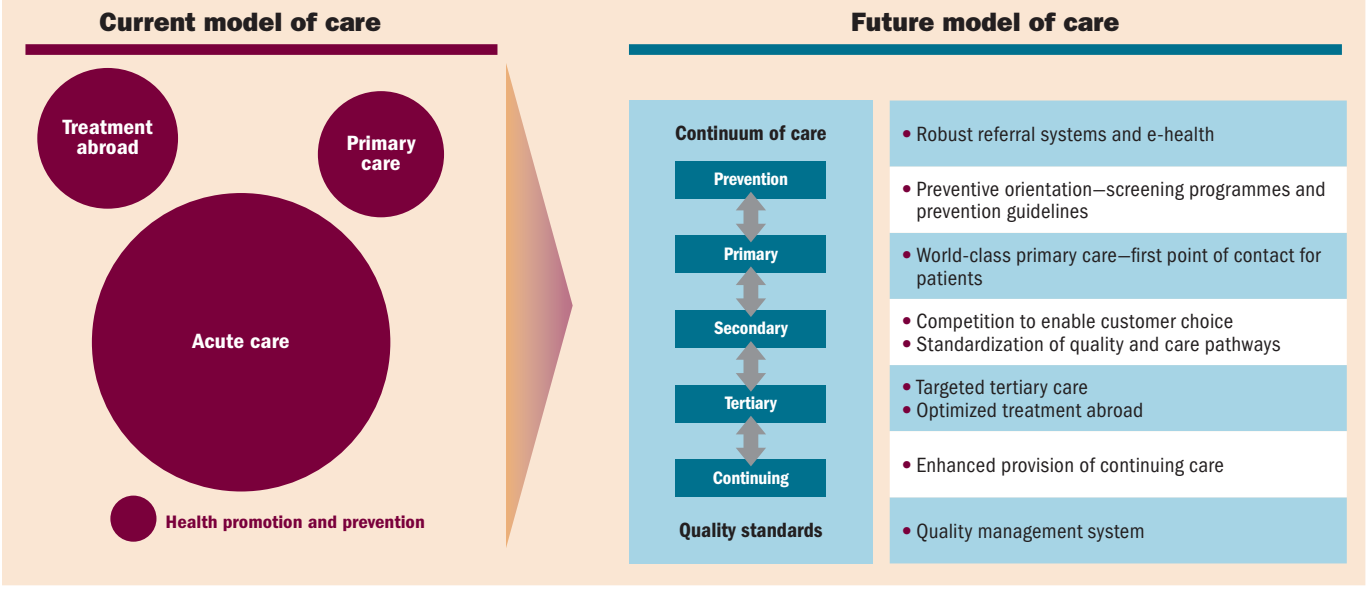
To achieve this outcome, the government will:

- Develop a model of primary care with sufficient capacity, funding and appropriate coverage of the entire population, providing high-quality services and enjoying public trust.
- Strengthen the primary care system as the cornerstone for comprehensive care that emphasizes wellness, bringing together health promotion, early detection and intervention, and evidence-based quality treatment for acute and chronic conditions.
- Ensure adequate and adequately trained primary healthcare staff.
- Define the scope of primary healthcare services using evidence-based guidelines, and ensure adequate budgets.

Targets

- Increase the number of general practice physicians from 0.193 per 1,000 people to 0.555.
- Ensure that the percentage of patients seen at secondary and tertiary healthcare facilities only after referral from primary healthcare facilities is 50% for outpatients and 40% for inpatients.

Figure 4.2 Current and future models of healthcare



Improve the configuration of hospital services

To achieve this outcome, the government will:
- Identify tasks that are relevant to the scope and administration of hospitals and efficiently organize hospital services to avoid unnecessary duplication in order to meet the future needs for health services.
- Define hospital designations under a regional model, establishing the scope, governance and services to meet future health needs within a clinical services framework applying best practices in delivering care.
- Reduce the length of hospital stays based on a continuum of care model.
- Enhance opportunities for same-day procedures, relying more on minimally invasive technologies whenever possible.
- Ensure evidence-based provision of high-quality secondary and tertiary services.
- Avoid unnecessary duplication, specifically for procedures or services where critical mass is required for quality and safety.
- Establish national centres of excellence for priority areas.

Targets
- Prepare a national clinical services framework.
- Establish national centres of excellence for three of the top five priority areas.

Improve continuing care design

To achieve this outcome, the government will:
- Provide a clear and comprehensive framework for continuing care, involving community- and home-based programmes and reflecting society's changing needs.
- Address emerging challenges involving rehabilitation services and the need to integrate services for the elderly.

Targets
- Increase the number of rehabilitation beds to 25 per 100,000 people.
- Increase the number of continuing care beds to 8.23 per 1,000 people.

Improve mental health services design

To achieve this outcome, the government will:
- Implement the approved model of care for mental health services in Qatar, based on enhanced community-based services, integration and decreased stigma.
- Protect the rights of people with mental health conditions under a national mental health act, ensuring access to appropriate, high-quality care in a suitable setting.

Targets
- Ensure that the number of psychiatric beds is at least 12.5 per 100,000 people.
- Implement the approved model of care by 2016.

Improve the provision of emergency and trauma services

To achieve this outcome, the government will:
- Establish an integrated national framework for emergency services, detailing the scope of services for each type of provider, along with standards and operating protocols.
- Ensure adequate geographic coverage based on use and on a hub-and-spoke model.

Targets
- Ensure that the response time for emergency medical services calls from patients with potentially life threatening conditions is within 10 minutes for 75% of calls and within 15–20 minutes for 95% of calls in urban areas, and within 15 minutes for 75% of calls in rural areas.
- Keep the number of deaths among patients reporting to the emergency department with a diagnosis of heart attack below 77.5 per 1,000.

Improve the efficiency of and access to community pharmacies

To achieve this outcome, the government will:
- Establish a community pharmacy network, supported by appropriate policy and processes, that reduces reliance on hospitals for filling

prescriptions, leading to increased efficiency and enhanced access.

Target

- Bring the number of community pharmacies to 0.17 per 1,000 people, with a 70% dispensing rate.

An integrated system of healthcare

The current healthcare system in Qatar needs improved coordination and standardization, to reduce fragmentation of care and system inefficiencies. An enhanced primary care system, implementation of electronic healthcare information exchanges and a focus on providing a continuum of care through wellness and disease management programmes will increase integration of care. Improved communication will enable holistic decision-making by healthcare providers, reducing clinical risk and raising the quality of patient care.

Systems that provide integrated access to medical data are needed for clearer communication and data analysis. This requires digitizing patient records, including clinical histories and archives with diagnostic imaging results, and standardizing disease coding. It also requires electronic prescriptions, to provide access to crucial patient information and increase prescription safety.

Qatar's healthcare system will provide a full continuum of care. Greater integration will create coherence and synergy in the healthcare system to improve the efficiency and quality of care.

Improve quality of care

To achieve this outcome, the government will:

- Establish a culture of continuously enhancing quality throughout the healthcare system and a framework for improving clinical processes.
- Define and disseminate evidence-based national clinical guidelines, patient pathways and standard procedures for referral and discharge.
- Establish performance agreements with healthcare providers that link outcomes to accountabilities.

Targets

- Establish protocols for priority conditions (cardiac, asthma, diabetic emergencies), and achieve a compliance rate of 100% by 2014.
- Implement Performance Agreements in 100% of hospitals, 100% of Primary Healthcare Centres and 50% of major polyclinics.

Develop and implement disease management programmes

To achieve this outcome, the government will:

- Establish a system of coordinated healthcare interventions that address the needs of individuals with priority chronic conditions such as diabetes and cardiovascular illnesses.
- Emphasize prevention of complications through evidence-based practice guidelines, patient empowerment strategies and regular patient monitoring.

Target

- Ensure that 75% of diabetics enrolled in a disease management programme have a haemoglobin A1C level less than 9.0.

Ensure access to accurate healthcare data

To achieve this outcome, the government will:

- Establish a programme that defines requirements to ensure the availability of comprehensive and accurate healthcare data, enables stakeholders to meet the requirements and mandates the reporting of these data.

Targets

- Achieve an 80% data-compliance rate for healthcare providers.
- Achieve coding accuracy of 80%.
- Establish disease registries for the top five priority diseases.

Capture the benefits of electronic health services

To achieve this outcome, the government will:

- Establish an effective and integrated national e-health system, with a clear governance

framework to improve quality, safety, efficiency and patient experience, ensuring full compatibility across all levels of care and full participation by all healthcare providers.

Targets
- Raise the percentage of primary care practitioners accessing the online diabetes registry from 0% to 25%.
- Ensure that 100% of images taken at hospitals are digitally stored and shareable among physicians.
- Raise the percentage of community pharmacies submitting dispensing information to the e-prescription system from 0% to 25%.

Enhance private sector involvement

To achieve this outcome, the government will:
- Formulate a strategy to enable greater private sector involvement in providing healthcare services while ensuring appropriate regulatory oversight. The plan will maximize desirable competition, benefiting quality, choice and efficiency.

Target
- Raise the share of healthcare beds provided by the private sector from 20% to 25%.

A focus on preventive healthcare

Qatar's healthcare system needs to address chronic diseases and their underlying risk factors. Prevention requires a fundamental shift in mindset, backed by a reallocation of resources. The aim is to embed prevention and early intervention into every aspect of the health system and to empower people to participate in self-care, prevention and wellness.

By shifting the emphasis from management of acute illness to prevention and early detection, the healthcare system can help people avoid the most costly, and dangerous, conditions. Experience shows that this approach will improve the effectiveness of the healthcare system and create a far healthier population. According to the World Health Organization, 40% of cancers and 80% of cases of premature heart disease, stroke and type 2 diabetes are preventable. This could have a large impact in Qatar, where more than 70% of deaths are caused by chronic diseases, injuries and congenital diseases.

Improve the governance of public health

To achieve this outcome, the government will:
- Generate an enhanced prevention strategy enabled by a robust governance system for monitoring and evaluating prevention initiatives.
- Engage a high-profile international expert as a prevention champion and visible symbol of the transformation. The prevention champion should be supported by a national preventive health task force and the Supreme Council of the Health's Department of Public Health.

Target
- Establish a monitoring and evaluation system for preventive healthcare.

Develop a comprehensive nutrition and physical activity programme

To achieve this outcome, the government will:
- Establish health promotion in schools.
- Establish wellness promotion in the workplace, led by government offices with established health promotion programmes.
- Implement media awareness campaigns for nutrition and physical activity.
- Establish prevention guidelines for healthcare services.
- Develop policies to reduce fast food consumption.
- Promote healthy food options at restaurants and key retail outlets.

Targets
- Decrease the prevalence of obesity by 3 percentage points, from 32% to 29% for all residents and from 40% to 37% for Qataris.
- Achieve a 10% weight reduction for people enrolled in dietary services programme.

Develop a comprehensive programme to reduce tobacco consumption

To achieve this outcome, the government will:
- Increase awareness of the health risks of tobacco, including sheesha and smokeless products, and provide cessation support services.
- Provide services linked to school health initiatives.
- Develop policies to reduce tobacco consumption, including sheesha and smokeless products.

Target
- Reduce the rate of smoking among adult men by 3 percentage points, from the current 32%.

Reduce consanguinity risks

To achieve this outcome, the government will:
- Implement educational campaigns on consanguinity.
- Provide counselling to support mandatory premarital screening.

Target
- Lower consanguineous marriages among first cousins from 34% to 27%.

Reduce the threat of communicable diseases

To achieve this outcome, the government will:
- Set up an early-warning surveillance and tracking system.
- Routinely update the vaccination programme for children and adults.
- Launch communicable disease prevention efforts in high-risk areas.
- Initiate follow-up screening of high-risk groups.

Targets
- Reduce tuberculosis prevalence from 1.6 per 10,000 people to 1.1.
- Implement an early-warning surveillance and tracking system.

Improve early detection of priority chronic diseases through a national screening programme

To achieve this outcome, the government will:
- Implement a national screening programme and infrastructure, including facilities, information technology, equipment and workforce.
- Develop screening guidelines for providers.

Target
- Ensure that the percentage of individuals in target groups covered by screening programmes is at least 50%.

Improve occupational health

To achieve this outcome, the government will:
- Develop national occupational health standards and regulations and enforce compliance.
- Improve health and safety conditions across all sectors.
- Focus on reducing workplace injuries among male workers (the third highest cause of accidental deaths).

Target
- Reduce the rate of injuries lasting more than three days to 3,000 or less per 100,000 workers.

Improve the health of women and children

To achieve this outcome, the government will:
- Prepare a comprehensive health programme that targets women's health challenges and identifies priority areas for women's health, including postpartum depression and domestic violence.
- Dedicate programmes and strategies to child health, including the promotion of exclusive breastfeeding and early nutrition guidance, enhanced prenatal care services and continuing successful vaccination programmes.

Targets
- Raise the rate of exclusive breastfeeding during the first six months from 12% to 25%.

- Achieve a compliance rate of more than 98% for all immunizations under the National Children Immunization schedule for children by age 1.

Address additional public health needs

To achieve this outcome, the government will:
- Improve coordination among government bodies to avoid duplication and prevent gaps in service in areas including road safety (see chapter 5), food safety, emergency preparedness and environmental health.

Targets
- Complete a national emergency preparedness plan.
- Implement an environmental impact health assessment process for all projects affecting public health.
- Establish a single Food Safety Authority.

A skilled national healthcare workforce

Just as people are a country's most valuable asset, the supply of skilled healthcare professionals is the cornerstone of a country's health sector. Healthcare workers are key agents of change, reform and innovation, driving continuous improvement in health service delivery. The healthcare workforce must be thus developed, respected and adequately resourced.

There must be strong, unified human resources policies that focus on enhancing long-term national capacity but at the same time recognize the necessity of a quality expatriate workforce, working together to achieve Qatar's goals.

Recruitment and retention of quality healthcare professionals are challenging, and the shortage of physicians, nurses and therapists impedes delivery of safe, effective and high-quality healthcare. Meeting future requirements could be difficult considering Qatar's recruitment and retention needs and the global shortage of healthcare professionals.

Improve workforce planning in the short and long terms

To achieve this outcome, the government will:
- Develop a national strategy on workforce planning and implement workforce-related national policies and programmes.
- Ensure that Qatar's health sector has adequate skilled personnel to sustain a high-quality health system and the right types of skills and specialties in the service delivery team.

Target
- Develop a national healthcare workforce plan.

Improve recruitment and retention

To achieve this outcome, the government will:
- Reduce barriers to recruitment of a quality workforce, both Qatari and expatriate (2009 Law on Human Resources Administration), and increase retention by raising worker morale and strengthening incentives (for example, making training and professional development opportunities available for all staff, as appropriate).
- Ensure appropriate Qatarization—with adequate support, mentorship and training—to benefit both individuals and organizations.

Target
- Ensure a voluntary turnover rate of less than 8%.

Improve professional education

To achieve this outcome, the government will:
- Take a pragmatic approach to increase the number of Qataris and long-term residents in healthcare and ensure that education for health professionals contributes to Qatar's future healthcare needs. A multifaceted approach will reduce barriers to admission, enhance sponsorship programmes, increase awareness campaigns on health professions and diversify the institutions available for capable students, both locally and internationally.

Target

- Raise the number of medical school graduates from 1 per 100,000 people to 3.

Optimize the skill mix

To achieve this outcome, the government will:

- Support a multidisciplinary team and patient-centred approach that enhances the quality of care.
- Use the available healthcare workforce effectively by optimizing the range of work that can be undertaken by different professionals.
- Recruit new classes of healthcare workers (such as nurse practitioners) to meet changing needs.
- Foster team-based collaborative models of service delivery.

Target

- Raise the number of allied health professionals from 0.4 per 1,000 people to 4.

A national health policy

An effective healthcare system needs a robust policy and regulatory framework to ensure quality and accountability. The government regulatory authority has changed several times in recent years, a cause of some instability within the sector. The current authority, the Supreme Council of Health, must deal with multiple challenges. The key challenge is to recruit and retain highly skilled staff, both Qatari and expatriate, amid a shortage of high-quality personnel.

Qatar's healthcare regulations need strengthening, through a clear and comprehensive regulatory framework that monitors the healthcare system, ensuring safety and quality without impeding progress. Changes will be needed in workforce recruitment and retention policies. The aim should be to employ the best possible workforce, Qatari or expatriate, while also focusing on enhancing national capacity. Qatarization should be supported, appropriately, with Qataris receiving the required mentorship and support to fill their roles.

Build the policy and regulatory capacity of the Supreme Council of Health

To achieve this outcome, the government will:

- Strengthen the Supreme Council's ability to establish a national regulatory framework, based on evidence, quality and safety standards, and to clear policies and procedures. This will enhance the efficiency and effectiveness of the healthcare sector and improve health outcomes for the population.

Targets

- Reduce vacancies on the Supreme Council of Health from 30% to 15%.
- Staff key positions required for strategy implementation within three months.

Ensure the quality of healthcare professionals

To achieve this outcome, the government will:

- Establish the Qatar Council of Health Practitioners as the regulator for healthcare professionals.
- Institute comprehensive regulation of healthcare professionals across the public and private sectors, to achieve safe, high-quality care.

Target

- Ensure that 100% of healthcare professionals are licensed by the Supreme Council of Health.

Ensure the quality of healthcare facilities

To achieve this outcome, the government will:

- Establish national standards and regulations for healthcare facilities across the public and private sectors.

Target

- Ensure that 100% of healthcare facilities are licensed by the Supreme Council of Health.

Ensure the quality of healthcare products and protect the public's safety

To achieve this outcome, the government will:

- Ensure that healthcare products and medications are safe and meet quality standards and that appropriate drugs are available when needed.
- Increase the capacity and fortify the roles of the Supreme Council of Health's Pharmacy and Drug Control Department, and strengthen regulation.
- Implement a national formulary.
- Centralize the purchasing of drugs and medical supplies to enhance efficiency and control costs.
- Include registration of medical services.

Targets

- Establish a national formulary.
- Regulate all medical devices.

Support patient complaints and rights

To achieve this outcome, the government will:

- Establish a patient advocacy body as a neutral, confidential and independent third party.

Targets

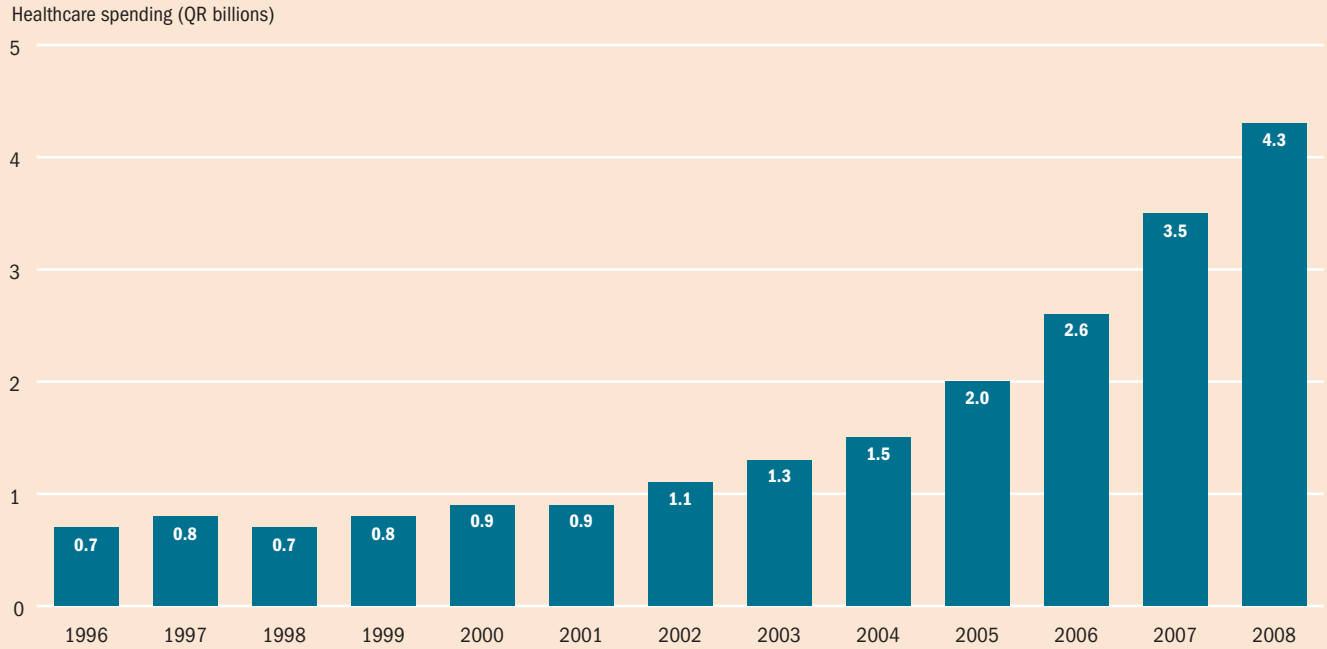
- Establish a patient advocacy body.
- Ensure that on patient satisfaction surveys, 70% of patients answer "yes" for recommending the health facility.

Effective and affordable services through partnerships in bearing healthcare costs

Qatar needs mechanisms to guarantee the provision of clinically appropriate and cost-effective services. Greater coordination, transparent accounting, proper cost sharing and a system of justification through a certificate of needs process for major healthcare infrastructure projects are all envisioned. From a national perspective, two areas need to be addressed: finance and infrastructure.

There is no single comprehensive information source on nationwide healthcare expenses. Analysis of healthcare spending data from Hamad Medical Corporation, the Supreme Council of Health and Primary Healthcare Centres found that spending rose almost fivefold from 2001 to 2008, to QR 4.3 billion (figure 4.3). The share of government

Figure 4.3 Healthcare spending in Qatar has risen almost fivefold since 2001



Note: Hamad Medical Corporation and National Health Authority spending only (excludes spending on major projects).

spending on healthcare surged from 6% to 15%, reflecting both a larger population and higher per capita spending—from QR 1,581 in 2001 to QR 4,383 in 2007. Much of the growth likely reflects increased investment in infrastructure and workforce. Per capita spending in Qatar is markedly below the Organisation for Economic Co-operation and Development country average of QR 8,047.

Traditionally, public health budgets in Qatar have been developed using linear extrapolation based on historical spending, rather than standard practices such as programme-based, multiyear and activity-based budgeting. The lack of national health accounts and transparent performance- or activity-based budgeting makes it difficult to compare costs across providers, establish cost drivers, identify best practices or monitor costs.

Because certain specialty services are unavailable in Qatar, some citizens are sent abroad for treatment. The amount spent on treatment abroad increases every year. There is additional spending on treatment abroad beyond that accounted for in the Supreme Council of Health budget. Improvements are possible through cost efficiency and better management, without limiting access to care.

Qatar has been working to implement a national health insurance scheme. The launch of health insurance will affect all elements of the healthcare system and afford Qatar multiple benefits. It will help Qatar achieve the principle of cost partnership outlined in *QNV 2030,* with employers and expatriates sharing the costs. Health insurance can provide the right set of incentives across all healthcare stakeholders and can be a good source of healthcare data. Payment and reimbursement mechanisms for health insurance can promote clarity in healthcare system spending.

Qatar must ensure that the prerequisites are in place, implementing them on an accelerated schedule to avoid jeopardizing integration of insurance as a key element of its health system.

The Supreme Council of Health has begun developing a national health accounts system, which will also support a more accurate budgetary process.

Strengthen the budgeting process

To achieve this outcome, the government will:
- Institute a comprehensive and accurate account of healthcare spending through a healthcare budgeting process (activity-based costing) and defined nomenclature that enable monitoring and control of costs.

Target
- Set up a multiyear activity-based budgeting system.

Achieve more efficient and effective management of treatment abroad

To achieve this outcome, the government will:
- Standardize processes to optimize expenditure and enhance quality of care.

Target
- Achieve a 50% follow-up rate in Qatar for patients receiving treatment abroad.

Establish a system of health insurance

To achieve this outcome, the government will:
- Set and meet the prerequisites for national health insurance as a tool for developing a sustainable, high-quality health system.
- Continue designing an insurance scheme that supports the model of care and carries incentives for cost-effective care and treatments.

Target
- Achieve 50% health insurance coverage by 2016.

The national infrastructure framework does not fully reflect the healthcare needs of the population. Historically, the emphasis has been on increasing hospital capacity rather than on providing community-based services. Needs are not always met on the facility level, and designs may

not fully reflect the requirements of the end user. Construction of healthcare infrastructure is often delayed, leading to outdated facility plans. Underlying these issues are limited coordination and planning, and a focus on providing services in an acute care facility rather than through primary care in a community setting.

A national healthcare infrastructure plan will provide the basis for healthcare infrastructure development. Once developed, the plan will need an oversight mechanism. Such a system would ensure that infrastructure spending aligns with needs and the chosen model of care and that decision-making is consistent and based on need.

Ensure health infrastructure planning

To achieve this outcome, the government will:

- Provide a dynamic long-term master plan for healthcare facilities and major equipment that can cope with continually changing needs. The master plan should be based on the model of care and services needed for the country, as identified in the clinical services framework.

Target

- Prepare and approve a healthcare infrastructure master plan.

Manage capital expenditures

To achieve this outcome, the government will:

- Establish a committee to which public providers and any private providers requesting government funds or reimbursements must present new healthcare infrastructure projects for approval based on a business case plan demonstrating need and aligned to the model of care.

Target

- Achieve 100% compliance by health facilities requesting funds to finance infrastructure and major medical equipment such that they should abide by the requirements of the certificate of needs process.

High-quality research directed at improving the effectiveness and quality of healthcare

Qatar has embarked on an ambitious research programme, but national coordination has been limited. Healthcare research focuses almost exclusively on biomedical topics, with little attention to public health or policy. Meeting the *QNV 2030* goals requires national alignment of all research activities, appropriate use of resources and research embedded in all fields of health, including primary care, clinical effectiveness, quality improvement, policy, public health and biomedicine.

Conduct high-quality research to support a world-class health system

To achieve this outcome, the government will:

- Focus research and appropriate funding on all areas of healthcare, especially public health, public policy, biomedicine and clinical effectiveness.
- Ensure that research activities comply with international standards of ethics, such as those outlined by the World Health Organization, which provide guidelines on ethical standards and procedures for research on humans. The guidelines define the role and constituents of an ethics committee and the requirements for submitting an application for review, detail the review procedure and specifics of the decision-making process and explain necessary follow-up and documentation procedures.
- Designate the Supreme Council of Health as the national governance structure for research providing a national regulatory framework, national direction on research priorities and coordination of publicly funded research.

Targets

- Establish a national research governance body led by the Supreme Council of Health.
- Produce at least four high-quality research papers (based on citation rate or on publication in refereed journals), per researcher, in priority areas.

Prerequisites for implementation

Successful implementation depends on the following critical prerequisites:

- *Human resources* is the most critical prerequisite. The first step is identifying the human resources that will be responsible for the outcomes. The recommended programmes will result in substantial need for healthcare expertise and professional healthcare capacity. Qatar will take aggressive steps to address this need.
- *A strong leadership and a governance system* must enforce implementation plans. The Supreme Council of Health will take this leadership and authoritative role, either through its Board or the Executive Committee, to provide governance for realizing the National Development Strategy 2011–2016 initiatives for health.
- *A dedicated programme management office* must be set up to support and enable implementation of the National Health Strategy. This office will track and monitor execution, identify risks and concerns, develop mitigation strategies, provide implementation status reports to leadership and furnish subject-matter expert support to the project teams and departments identified to lead the projects.
- *Sequencing and prioritization* are paramount, given the difficulty of carrying out the programmes. Outputs have been prioritized to ensure that implementation focuses on efforts that promise the greatest impact. Any limits on implementation will arise not from budgetary constraints but from a scarcity of skilled and qualified personnel.
- *A sustained change management and communication effort* is needed to provide intensive and regular communication with all the stakeholders directly involved in administering the programmes, broader outreach to the healthcare community and a public relations and marketing campaign to engage the public.

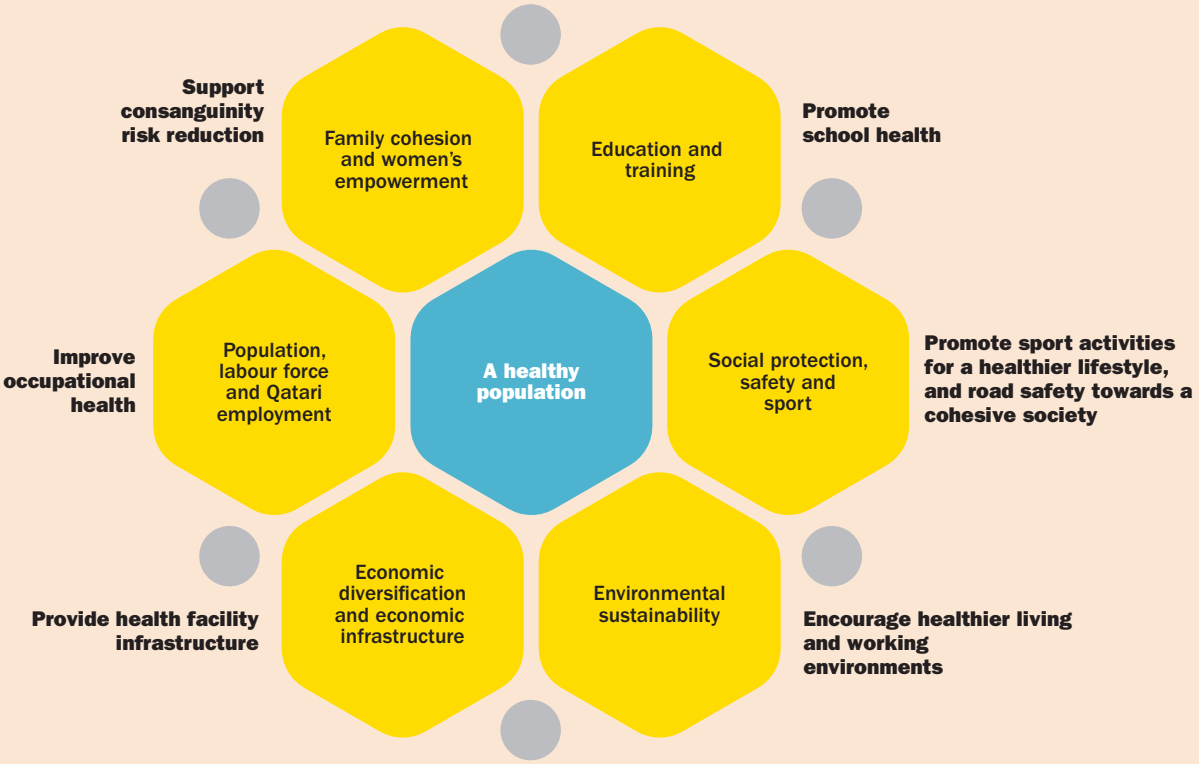
Fostering cross-sectoral links

The strategy outlined here brings to life the expectations for the healthcare sector laid out in *QNV 2030*. A world-class integrated healthcare system is a critical component of the human development pillar of *QNV 2030*. The 2011–2016 strategy for healthcare aims to move the sector far in the direction of achieving this vision. The recommended programmes are structured to ensure complete alignment with *QNV 2030*.

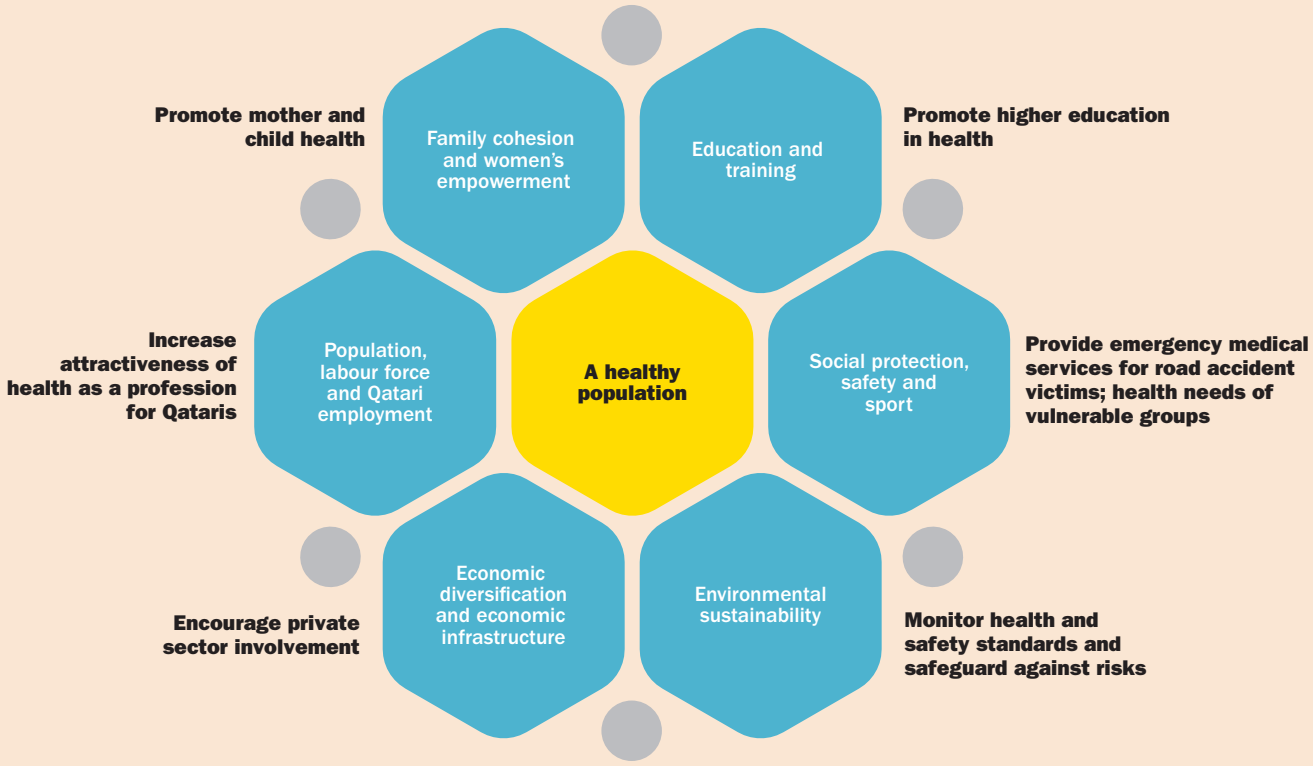
This strategy's success will be determined through its implementation. It will also depend on collaboration with other sectors. A healthy population is both a goal and an enabler of *QNV 2030*. In this regard it is important to highlight the most critical area of cross-sectoral linkage—public health. Governments across the world have recognized that public health is the responsibility of all stakeholders, not just the healthcare sector. For Qatar this means a comprehensive effort in which the Supreme Council of Health and government, private and civil society stakeholders cooperate. Many recommended critical initiatives (such as school health promotion, road safety, occupational health) require multistakeholder collaboration. These cross-sectoral links will be reflected as the strategy moves into the next phase of validation and sector alignment (figure 4.4).

Figure 4.4 A healthy population is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for healthcare



Healthcare as an enabler for other sectors



Building knowledge and skills

"Qatar aims to build a modern world-class educational system that provides students with a first-rate education."
—Qatar National Vision 2030

As Qatar's economy diversifies more from its reliance on gas and oil, success will increasingly depend on the ability to compete in a global knowledge economy. Educating and training Qataris to their full potential will be critical to continuing progress.

Beyond preparing citizens to be part of the country's economic engine, education and training offer multiple benefits to society. Education provides a solid grounding in Qatari religious, moral and ethical values, national identity, traditions and cultural heritage. Schools produce well rounded and engaged citizens and build more cohesive and participatory societies. Education and training also help people make better decisions about health, marriage, parenting and social responsibility. Finally, a successful education strategy supports innovation in science, medicine and industry.

To help Qatar benefit from both the social and economic advantages of education, *QNV 2030* commits to delivering world-class education and training opportunities to Qatari citizens that align with their abilities and interests and that prepare them for employment.

QNV 2030 articulates several education and training goals:

- A world-class education system that enables citizens to achieve their aspirations and that meets Qatar's needs.
- A national network of formal and nonformal education programmes that equips Qatari children and youth with the skills and motivation to contribute to society.
- Well developed, independent, self-managing and accountable education institutions operating under centrally determined guidelines.
- An effective system for funding scientific research shared by the public and private sectors and conducted in cooperation with international organizations and leading international research centres.
- A strong international role in cultural and intellectual activity and scientific research.

Qatar has made great strides towards a world-class education system, through the Education for a New Era reforms, which began after the Supreme Education Council was established in 2002, and the Qatar University reforms, which began in 2003. In addition, Qatar Foundation's Education City has continued to expand and progress over the past decade, with the establishment of a cluster of top-class international universities that are strengthening Qatar's capacity in innovative education and research.

Qatar is also attracting renowned education institutions, with three Outstanding Schools already in place (Michael E. DeBakey High School for Health Professionals, International School of London and Sherborne School) and more in the pipeline. At the technical level, in 2010 Qatar opened its first community college in partnership with Houston Community College, which complements the College of North Atlantic Qatar (CNA-Q). All these institutions award internationally recognized diplomas and degrees and support Qatar's aim to become a premier knowledge-based society.

As the agency in charge of developing education in Qatar, the Supreme Education Council strives to upgrade the standard of education to meet the needs for outstanding human resources across all sectors—which aligns with the national education policy that is in turn linked to education goals, plans and programmes reflecting *QNV 2030*.

Previous achievements were compatible with the *QNV 2030* requirements for setting the plans, programmes and monitoring needed to implement the national education policy and its organizational structure. These changes should be compatible

with the goals of the Education for a New Era reform agenda and provide more options, greater variety, common accountability and increased independence.

All government schools have been transformed into independent schools that are financed by the government but managed independently according to standards, policies and systems adopted and approved by the Supreme Education Council. Owners of independent school licences, teachers, parents and students are responsible for achieving success at all levels of the education system.

To further improve education, professional standards that detail the skills and knowledge to be acquired during a career at independent schools were established for education school principals, leaders and teachers. The standards provide a clear vision for performance. Professional licences for teachers and education leaders are based on these standards according to cumulative skill levels.

To increase choice, under the Education for a New Era reform agenda, parents can select a public or private school that best fits their children's needs. A voucher programme provides options for the needy to access private education. To expand variety, schools and instructional programmes are encouraged to meet differing needs. To share accountability, a transparent assessment system —the annual Qatar Comprehensive Evaluation Assessment for independent school students— holds all school leaders, teachers and parents accountable for the success of students. To devolve autonomy, schools and teachers are encouraged to innovate in meeting the needs of individual students and parents within the framework of common curriculum standards.

The curriculum standards are an important part of Qatar's education development plan, which has been under preparation since the independent schools system was established in 2004. The plan has changed the curriculum culture to one that is more student-centred and that encourages using education mediums and conducting scientific research.

The goal of developing all aspects of a student's personality and enhancing student loyalty to the country has been realized. The curriculum standards also cover cognitive and skill dimensions— which include scientific, critical and logical thinking as well as learning processes such as observation, classification and measurement—in addition to attitudes and values.

The standards spell out what knowledge and skills students should acquire at each K–12 education level and ensure that students receive an education that reflects the advanced standards used in other countries. This will qualify general education graduates to join the best universities and to compete in the local and international labour markets. Graduates will acquire the education needed for a successful private and occupational life in the 21st century, including knowledge of Arabic language, English language, mathematics, integrated sciences, social sciences and physical education.

Community participation, an important pillar in the education system, enhances development and monitoring, which are overseen by the board of every school and through public and private sector participation in education—for example, in private schools that are managed by both the public and private sectors.

Driving the reform initiatives of Education for a New Era are the three policy and regulatory institutes of the Supreme Education Council. The Education Institute oversees and supports independent schools and enforces curriculum standards. The Evaluation Institute conducts student testing, monitors student learning and evaluates school performance. The Higher Education Institute advises students about career options and opportunities for higher education in Qatar and abroad and administers scholarships and grants.

The education and training initiatives of the National Development Strategy 2011–2016 build on the ongoing reforms and are based on an extensive stakeholder consultation and analysis of the achievements and challenges facing the sector, along with benchmarking of international best practices. This strategy for continuing reform of education and training will drive far-reaching changes. As international experience suggests, successful education reforms, though they may take many years to realize their full benefits, will be to the advantage of all who live and work in Qatar, if consistently implemented.

Qatar's education and training system prepares all its people for success in a world of increasingly complex requirements, serving as a vehicle for social and economic transformation.

- On an individual level, it will offer Qatari citizens opportunities to realize their intellectual potential, develop their abilities and follow their aspirations and interests. The evolving education system also aims to motivate Qataris to use their knowledge and skills to better society. The system will encourage analytic and critical thinking, creativity and innovation.
- On an institutional level, it will improve accountability and professionalism, making best use of available resources.
- On a societal level, it will afford students a sense of belonging, responsibility and citizenship so they can lead the way to an economic and societal vision beyond hydrocarbons. The system will promote social cohesion and respect for Qatari values and heritage and advocate constructive interaction with other countries.

The needs for developing Qatar's education and training sector to achieve these overarching goals have been consolidated into 20 sector outcomes, with 29 related projects, that represent the framework for education and training in the National Development Strategy 2011–2016. Six core outcomes require integration and planning across all educational sectors. The others are specific to K–12 general education (1–2 years of kindergarten plus 6 years of primary school, 3 years of preparatory school and 3 years of secondary school), higher education, technical education and vocational training, and scientific research. These are presented later in the chapter.

Desired qualities of Qatar's education and training system

Qatar's education and training system must be comprehensive and integrated, stretching from early childhood education through to higher level education and additional training. Engrained in this system is the concept of lifelong learning, with individuals encouraged to acquire education and update their skills throughout their lives. This continuum spans three education sectors: general education, higher education, and technical education and vocational training. While each sector has a distinct identity, mission and function, the sectors need to operate within an overarching framework that embodies policy-related principles. And both education and training need to establish stronger links with Qatar's labour market.

Further reform of Qatar's education and training system will address three policy themes: quality, equity and inclusiveness, and portability and mobility. These themes will guide policy decisions, along with variety, choice and accountability. A strengthened reform programme will tackle a number of critical challenges and opportunities affecting both supply of and demand for education and training. These include the underachievement of Qatari students in math, science and English language at all levels and weaknesses in education administration and the teaching profession. The educational curriculum needs to be more aligned to the needs of the labour market while supporting Qatari values. The system needs to offer multiple pathways beyond the secondary level to encourage a higher continuation rates.

Quality is critical in ensuring outcomes that address the needs of current and future labour markets. The challenge arises in achieving

consistent and sustained quality across sectors. Quality teachers, trainers and lecturers, as well as education planners, are a prerequisite, making it mandatory that all sectors monitor teacher training, qualifications and professional development. The current high turnover of Qatari and expatriate teaching staff must be reversed.

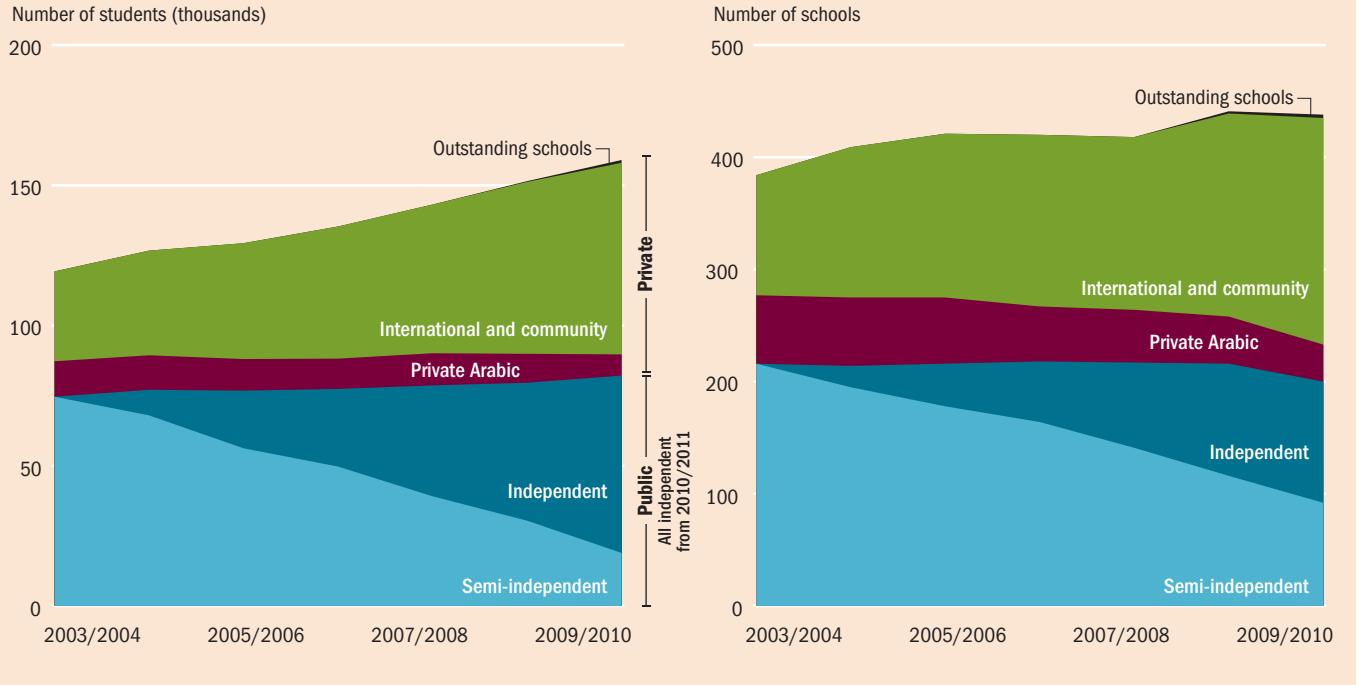
Attention to quality will be part of establishing curricula, resourcing schools and training centres, improving information and communication technology and managing governance arrangements. It will contribute to improving attainment by students at all levels, particularly in science, mathematics and languages. And it will support increased transitions to post-secondary studies. A major priority is to increase the share of students, especially male students, who pursue a tertiary education, to which returns are high.

Equity and inclusiveness also cut across the education and training sector. Related to lifelong learning, this principle should enable all people to acquire, develop and update their skills throughout their lives. Appropriate training and education should be available and accessible to all. Meeting the stated aim of "accessible educational programmes for lifelong learning", in a context of participation and inclusion, will require policies that overcome socioeconomic barriers of age, gender and geography.

Important for inclusiveness is further expanding private schools in line with growing demand among Qatari and expatriate children (figure 4.5). Qatari parents are increasingly paying to send their children to international schools. Further, a school voucher programme is available for use at selected schools, based on need. The ultimate goal is to allow all Qatari students to participate, with school fees no longer a driving factor in school choice. Competition is expected to emerge not only between independent schools, but also between public and private schools, thus promoting variety and choice.

Improved standards for private schools, initiated by the Supreme Education Council, are one reason

Figure 4.5 With the growth in the number of school-going children in Qatar, demand for international and community schools is rising



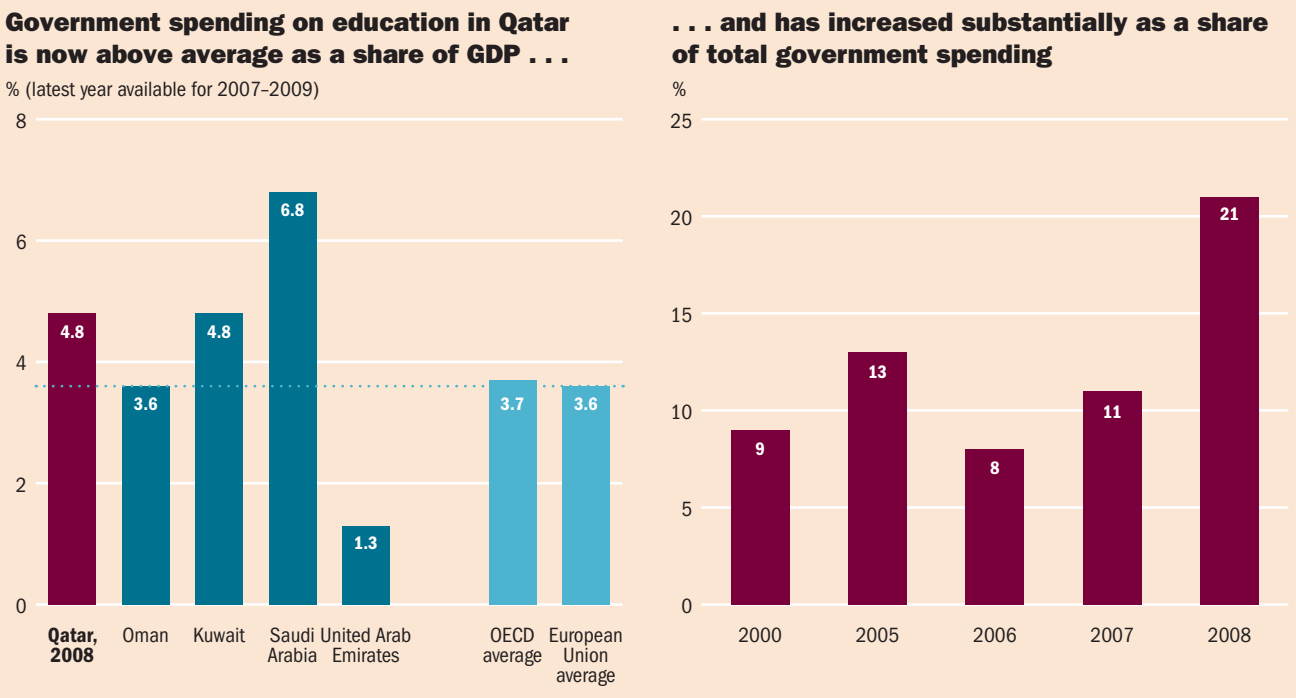
behind the growth in the number of school-going children in private schools. However, other important factors cannot be ignored: reverse migration has increased, as a result of some indpendent schools providing better eduation than some private schools.

Portability and mobility, another key policy theme, also promotes variety and choice. Students and other stakeholders in education and training systems expect to have their qualifications recognized by education and training institutions and employers and to receive credit for previous studies. In addition, students and stakeholders expect flexible career and study pathways for entering and re-entering the education and training system without penalty. This approach maximizes citizens' flexibility in planning their careers, unconstrained by life stage or location.

To realize Qatar's vision of providing opportunities for citizens to achieve their full potential, Qataris must be able to move easily among education and training options and between those options and the workplace. No longer can education pathways be considered a linear progression through a vertical hierarchy of qualifications. Both vertical and horizontal pathways are needed, within and between sectors and institutions. A National Qualifications Framework will strengthen coordination and integration of the education and training systems.

Qatar has invested heavily in best practice models of education. It will continue to do so to adapt and mould basic and higher education to meet the skill requirements of a more diversified economy, while respecting Qatar's cultural values and national heritage. The share of government spending on education has grown markedly in recent years and now exceeds the average for Organisation for Economic Co-operation and Development countries and for all Gulf Cooperation Council countries except Saudi Arabia (figure 4.6).

Figure 4.6 Government spending on education and training is high in Qatar compared with benchmark countries

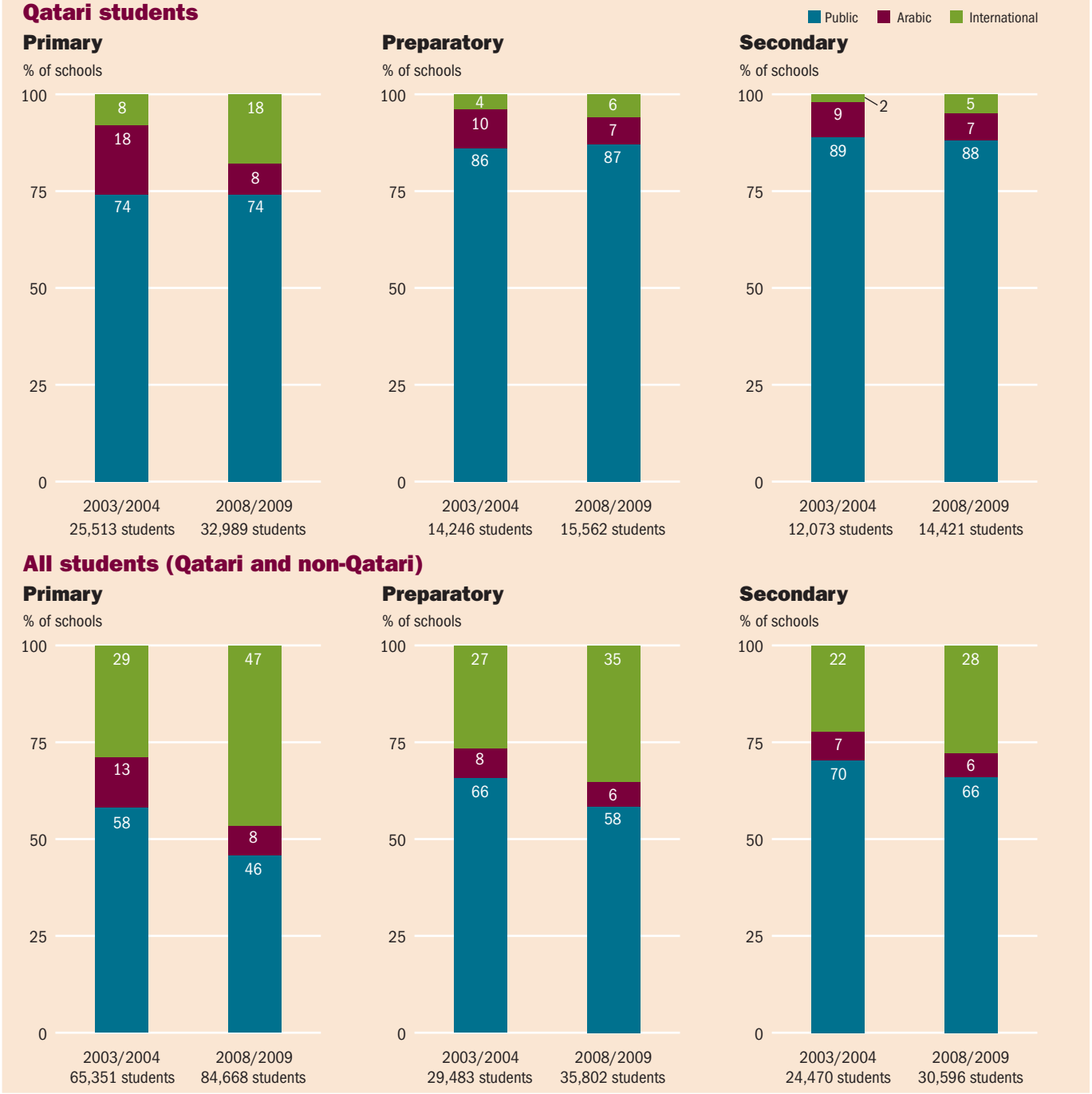


Source: UNESCO Institute for Statistics, Education data set (2010); AMEinfo (2008); OECD, *Education at a Glance* (2009).

Growing importance of private and independent schools and rising enrolment of children of expatriates

Understanding the dynamics of enrolment of Qatari children and children of expatriates is important for interpreting recent changes in Qatar's education and training system and planning for its future. With the rising number of expatriates, their children now constitute the majority of students at all levels of education. Both groups of students are enrolled in public and private schools, and there has been a marked growth in international schools (figure 4.7). Future trends in the size

Figure 4.7 The share of Qataris in international schools at all levels grew markedly between 2003/2004 and 2008/2009



and composition of the expatriate school-going population is necessarily uncertain and will reflect trends in the demand for higher skilled workers.

The majority of Qatari students are enrolled in public schools, which all became independent schools in 2010–2011. But while their enrolment share in public schools has remained unchanged since 2003/2004, when implementation of the K–12 reforms was getting under way, their share in private international schools has surged at all levels (see figure 4.7). Overall Qatari enrolment in private international schools now ranks second after public schools, ahead of private Arabic schools. The switch reflects the increasing importance of non-Arabic schools, the majority providing instruction in English.

The increasing number of expatriate children exposes Qatari children to their peers from a diverse group of countries and cultural backgrounds and provides the opportunity to establish friendships with them and share experiences. It also has implications for ensuring that the education system fulfils its role of strengthening Qatari culture and values.

For Qataris, *QNV 2030* calls for developing an education system that "equips citizens to achieve their aspirations and to meet the needs of Qatar's society". An important objective relates to the role of education and training in meeting the current and future needs of the labour market. For children of expatriates, the aim is to meet the general commitment to fully address "their cultural rights . . . and public service needs" by providing access to a world-class education system. The availability of high-quality education will itself be a critical determinant in attracting high-skilled expatriates to Qatar.

Realizing *Qatar National Vision 2030* for education and training

Despite considerable progress towards a world-class education system that meets Qatar's needs and despite comprehensive strategic plans of education institutions that include integrated and effective strategic objectives, in advancing reforms across education levels, Qatar will engage in more cohesive strategic planning. To reach the goals for the education sector, the government will address core education and training issues, improve K–12 general education, improve higher education, strengthen technical education and vocational training and enhance scientific research.

Addressing core education and training issues

To track education processes effectively, data need to be more readily available and transparent. Teacher quality needs to be raised through professional development and a compensation system that attracts top talent to the country and retains it. Motivating students requires both in-school policies and outreach to students and parents, who may harbour misconceptions about the value of education.

Formulate a comprehensive, integrated 10-year education strategic plan for all stakeholders, incorporating quality, efficiency and inclusiveness

Ensuring cohesion across all education phases is essential to promoting world-class education. Some of Qatar's education and training institutions have already met this goal, and others have defined a strategic path to reach it. But strategic planning is often not aligned across stakeholders, resulting in gaps, overlaps and unclear competencies. Forming a comprehensive, integrated 10-year strategic plan for all education phases that promotes quality, efficiency and equity and includes all stakeholders, would catalyse development of the sector.

Ten-year education strategic plan

To support this initiative, the government will:

- Define the vision and mission of the strategic plan.
- Derive strategic goals and align with key stakeholders.

- Conduct a baseline study of education sectors and perform benchmarking.
- Integrate existing programmes across all education sectors.
- Develop an effective mechanism for evaluation and follow-up.
- Align with stakeholders from public and private sectors, civil society organizations and academia and develop a mechanism for communication and coordination.

Target

- Develop and implement an integrated 10-year strategic plan for all education phases.

Strengthen Qatari values throughout education and training

Qatari society has been exposed to many new influences in the last decade, including the ever-growing number of expatriates working and living in Qatar. While a large expatriate community broadens perspectives on other cultures and lifestyles, it also threatens traditional Qatari values founded in Arabic culture and Islam. For this reason, *QNV 2030* specifies that education should contribute to "a solid grounding in Qatari moral and ethical values, traditions and cultural heritage".

Although providing academic guidance and deepening the moral values instilled by Qatari families and communities are already a core principle of the curricula and institutional missions, additional measures can support this goal through all phases of education and training.

Support the strengthening of Qatari values

To support this initiative, the government will:

- Conduct focus groups with key government officials, experts and university representatives on the national values to be instilled in Qatari students.
- Assign a development expert to prepare programmes in coordination with education and training sector representatives and government officials.
- Form a task team of education sector representatives and government officials to determine a roadmap for implementing new programmes.
- Implement programmes and communicate to parents and students.
- Provide input to the national curriculum committee.

Target

- Design and launch education programmes that instil national values in Qatari students.

Develop education and training professionals and institutions

Recent regulatory reforms have improved the qualifications and standards for professionals in Qatar's education and training sector. More time is dedicated to in-service professional development in public schools, teachers are evaluated more often and principals need to provide proof of teaching experience. While these efforts are showing early results, many teachers still lack formal teaching qualifications. Teacher turnover is high, and Qatari boys are rarely taught by nationals. Overall, education and training professions have limited appeal—they are low paid and offer few options for professional and career development.

Several levers will have to be activated to improve principal effectiveness and accountability, teacher accountability and institutional accountability towards stakeholders, among other issues. These measures should open up multiple opportunities in education and training and attract well qualified and ambitious professionals.

Educated workforce and institutional development plan

To support this initiative, the government will:

- Prepare a professional development strategy for K–12 teachers and principals.
- Produce an operational and management model for the education and development of teachers for the technical education and vocational training system.

- Design recruitment, development and incentive programmes to attract talented Qataris to teaching positions within higher education.

Targets

- Formulate and implement a workforce and institutional development plan for education and training professionals and institutions.
- Enhance the professional capacity of teachers and workers in K–12 education.

Integrate information and communication technology in education and administrative processes

Information and communication technology (ICT) is a key enabler of successful education and training. Mastery of technology is required to participate in and contribute more effectively to the knowledge economy. Using ICT in teaching can improve learning outcomes and increase effectiveness in administrative functions.

Qatar's K–12 institutions are comparatively well equipped with ICT infrastructure, due to large recent investments, and many students enjoy access to school computers comparable to that in European countries (figure 4.8). Under the Education for a New Era reform, many teachers received intensive training on integrating ICT into teaching and learning.

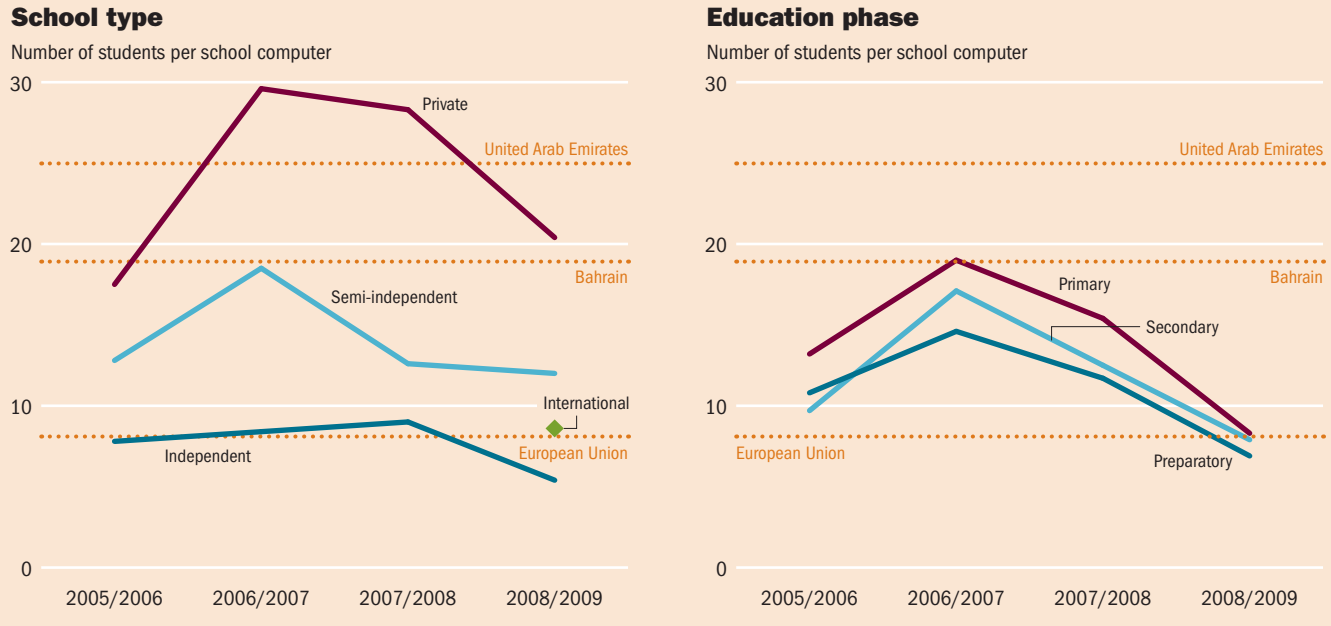
However, it remains unclear whether these ICT opportunities are used to their full potential. A continuing training programme for teachers is likely required for students to fully benefit from ICT-supported learning. Also, no integrated strategy links ICT use in K–12 education with higher education and technical education and vocational training. Developing an integrated ICT strategy for education and training will be the starting point of an even more important role of ICT in this sector.

Management strategy for using information and communication technology for improved learning environment

To support this initiative, the government will:

- Develop an integrated ICT strategy for all education sectors in Qatar based on international ICT

Figure 4.8 Most students in Qatar have ready access to computers at school



Source: ictQATAR, *Qatar's ICT Landscape* (2009), chapter 4.

best practices to improve management, administrative processes, learning environments, teaching methods and education outcomes.
- Prepare a detailed implementation plan for increased ICT use in school administration and in education services delivery, along with a set of ICT standards that are mandatory for public education institutions and strongly recommended for private institutions.

Target
- Develop and implement an ICT strategy.

Increase motivation and awareness of the benefits of education and training

Because the motivation to learn is a key driver of success in the education and training system and beyond, strengthening student motivation throughout all educational sectors has emerged as a priority.

High rates of absenteeism, little time spent on homework and a lack of classroom discipline compared with international benchmark countries suggest that many students, especially boys and men, lack the motivation to take advantage of the education and lifelong learning opportunities that the strategy envisions. Many Qatari students appear to believe that they can secure jobs and make a good living despite low academic qualifications. Moreover, students and their parents may not fully appreciate the benefits of a high-quality education when they make schooling choices. This pattern continues through higher education, with many students choosing not to enrol or discontinuing their studies early, so as to enter public sector employment.

Comprehensive communication and motivation plan

To support this initiative, the government will:
- Prepare an integrated, long-term effort to communicate to stakeholders, including students, parents, teachers and principals, to raise awareness of the value of education and the consequences of education decisions.

Target
- Prepare and implement a comprehensive communication plan to increase student motivation.

Support evidence-based monitoring and policy-making by key stakeholders

Recent reforms in education and training have greatly improved the availability of reliable data. Additional data production and gathering activities include the annual Qatar Comprehensive Educational Assessment and data publications such as the annual *Schools and Schooling in Qatar* report.

But Qatar lacks a model for collecting and analysing and disseminating education and training data that can be used across all phases and institutions. Ready access to such data would increase accountability to the government and the public and support evidence-based policy-making that advances the development of the education and training sector.

Comprehensive education and training database

To support this initiative, the government will:
- Determine data needs by consulting with stakeholders.
- Establish the most efficient operational processes for collecting data from relevant institutions.
- Develop a process to periodically review the effectiveness of the database manager in meeting informational needs.
- Establish formal links to information providers.
- Provide online access and search options to the database.
- Include transparent performance indicators in strategic and operational plans.

Targets
- Create a comprehensive education and training information and planning database.
- Use the database to build a monitoring and evaluation framework for the strategy, taking into account cross-sectoral links.

Improving K–12 general education

The reforms in K–12 general education have addressed some of the roots of low student performance, especially those related to education inputs. But several issues remain unaddressed.

- Enrolment rates and ratios are generally high in primary and preparatory education but can still be improved. Mandating kindergarten and secondary schooling could increase educational achievement.
- Teachers and students are overwhelmed by reform initiatives. The concurrent implementation of curriculum standards that need to be detailed by teachers, a student-centred teaching approach and the use of English as the instructional language may be burdening teachers with so many new responsibilities that classroom learning has suffered.
- Many secondary school graduates are not sufficiently literate and numerate for higher education, signalling a failure of the K–12 system to prepare students for further education opportunities.

Ensure universal access to high-quality education for K–12

Because financial and societal returns to education rise with the duration of education, the government and citizens should strive to provide opportunities for more schooling.

Also important is taking a holistic approach to developing technical and behavioural skills, from early childhood through adulthood. Any deficits acquired early in life are difficult to remedy later, so good nutrition, mental stimulation and basic cognitive development are essential for infants and preschoolers.

Within the framework of the Education for a New Era initiative developed by the Supreme Education Council, standards were set for six subjects at the K–12 level (Arabic language, English language, mathematics, sciences, social studies and physical education). Designed to help teachers provide a high level of education for every class in all types of schools through work schemes and model lectures, the standards are the basis of unified tests for students in Qatar.

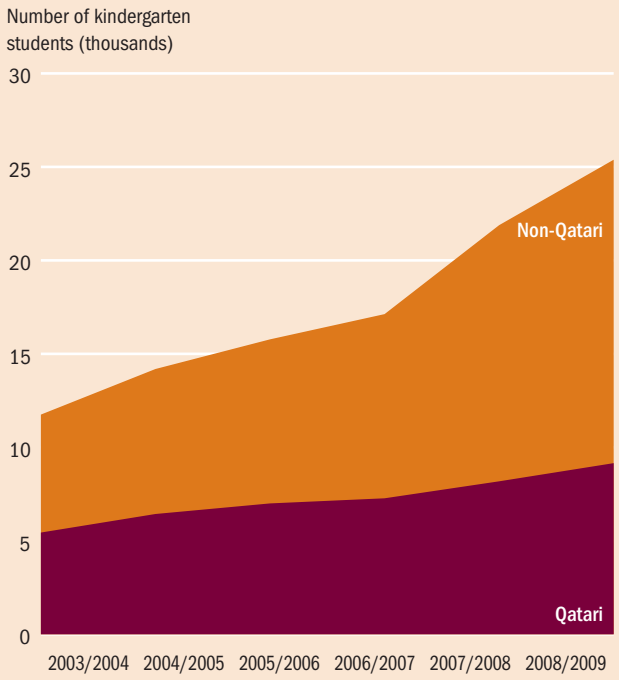
However, the standards constituted a challenge for teachers and students, especially when accompanied by other changes, such as adopting English as the language of instruction and introducing a student-centred approach to teaching.

The education system in Qatar has set the foundations, standards and plans needed to upgrade the management of private schools, improve the quality of education in schools and support the education environment in a way that enhances Qatari values. Moreover, a system for evaluation, licensing and re-licensing was put in place. In addition, private education law was developed, an education coupons programme was devised and branches were opened in Qatar for outstanding private schools.

Preschooling has grown tremendously since the Education for a New Era reforms were initiated (figure 4.9), with around half the children of appropriate age participating. Some 9 out of 10 attend private kindergartens. Preschools are an excellent mechanism supporting early childhood development, which enhances a child's future learning ability. Preschooling stimulates cognitive and linguistic development. Because kindergarten is not yet mandatory, some children enter school less prepared than others. International evidence suggests that children benefit most from preschool when all classmates are at a similar level of knowledge.

Participation in primary, preparatory and secondary schooling is high in Qatar compared with regional benchmarks (figure 4.10). However, enrolment drops considerably after the end of compulsory schooling, especially among male students. To ensure opportunities in higher education and training and in continuing education for all students, the government will consider making secondary schooling compulsory and

Figure 4.9 The number of Qatari and non-Qatari kindergarten students is increasing rapidly, and most attend private schools



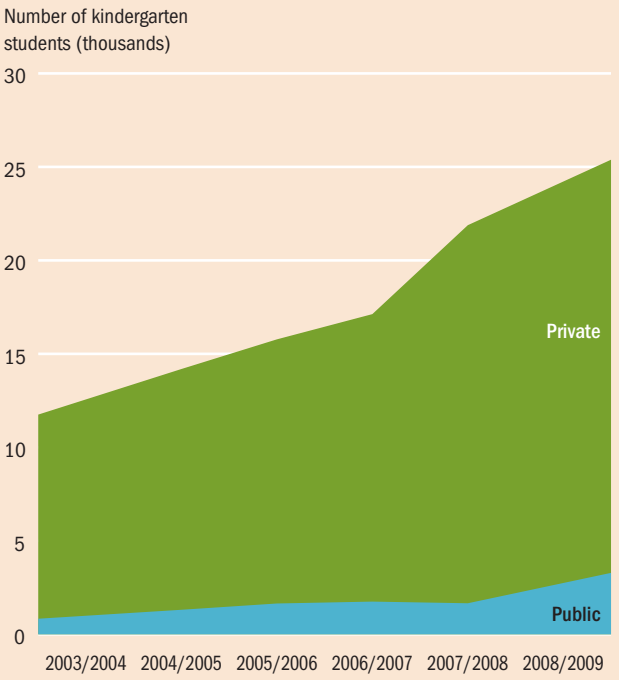
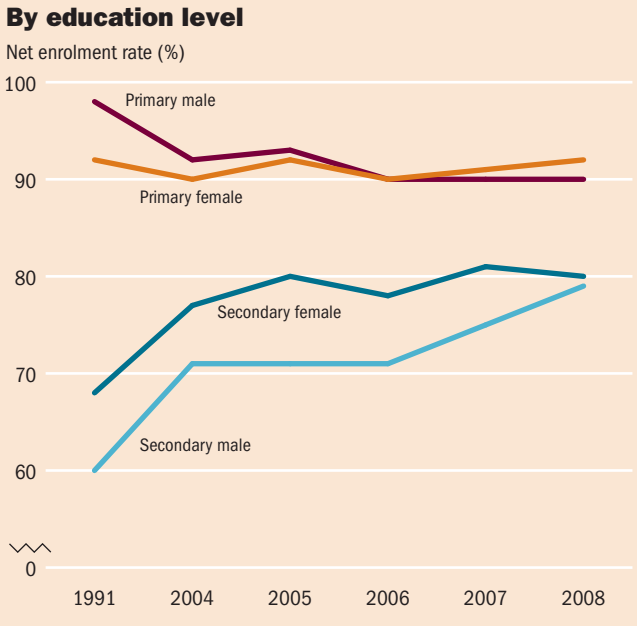
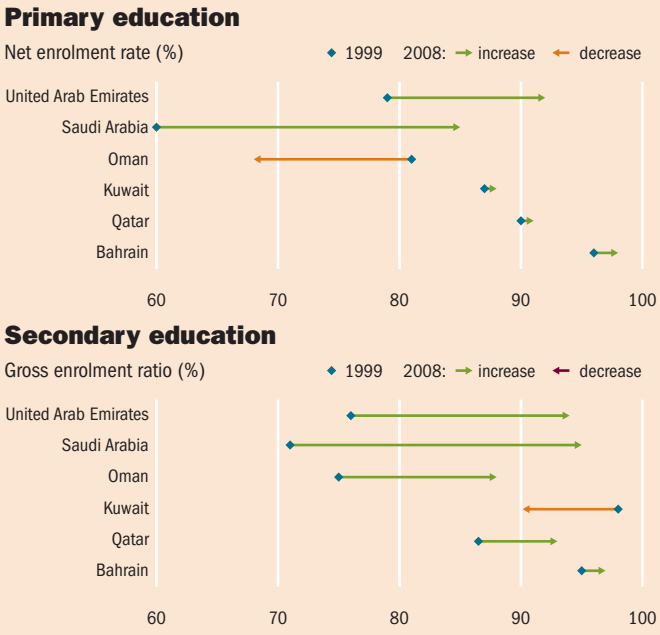


Figure 4.10 Participation in primary schooling is high in Qatar compared with regional benchmarks, but there is scope for higher participation in secondary schooling





Source: UNESCO, *EFA Global Monitoring Report* (2009); World Bank database (2011); Ministry of Education, *Annual Statistics Abstract* (various years).

integrating vocational and technical options into the curriculum.

Both suggestions would require increasing school capacity—a need already evident in the ever-growing number of students in younger cohorts. A school building programme is therefore a prerequisite for increasing the duration of compulsory schooling.

Building sufficient education infrastructure capacity

To support this initiative, the government will:
- Develop an infrastructure plan to ensure adequate capacity to educate all children.

Targets
- Expand school capacity in line with projected growth of student numbers.
- Improve the quality of school buildings.

Mandatory kindergarten and secondary schooling

To support this initiative, the government will:
- Introduce measures to make kindergarten and secondary schooling mandatory.

Target
- Raise the net enrolment rate above 95% throughout K–12.

Consistently provide high-quality K–12 education

As part of the Education for a New Era reforms, the Supreme Education Council has developed K–12 curriculum standards for core subjects as guidelines for providing high-quality education across schools and school types. The standards support teachers in delivering the required content for each grade and are the basis for standardized student testing. Evidence suggests that many teachers and students are overwhelmed by these standards, which have been introduced alongside other major reforms. Faced with so many changes at the same time, teachers report that they tend to revert to old curricula and teaching methods.

One possible solution, implemented in benchmark countries, is to design a national curriculum that provides closer guidance about what and how teachers should teach. This approach would ease the burden on teachers to develop their own instructional design and content to meet changing guidelines. It would also provide considerable flexibility to teachers and schools that have already mastered the reforms.

Updated national K–12 curriculum

To support this initiative, the government will:
- Establish a high-level committee to review national curriculum standards.
- Establish the curriculum.
- Conduct a pilot programme with monitoring and evaluation.
- Implement the national curriculum across all schools.
- Disseminate information on the new national curriculum and related educational resources.

Targets
- Design and implement a high-quality national K–12 curriculum.
- Expand training programmes according to national occupational and curriculum standards.

Support K–12 students to fulfil their potential

Most schools adhere to a standard curriculum, so there is little variation in school profiles. Qatar needs to provide diverse education options that allow students to choose curricula and teaching methods that match their aspirations and abilities.

A uniform public K–12 system neglects students with special talents and interests, such as students drawn to arts, music or sports. The school system also largely ignores vocational and technical talents. International benchmarks suggest that Qatar would be well served by offering student-oriented

learning and fostering talents outside of the standard curriculum. These goals could be achieved through special classes or specialized schools.

Qatar's school system must also acknowledge weaknesses in student capabilities. On national and international tests, many Qatari students perform below expectations in core subjects such as math and science. Programmes should be considered to support students who are weak in these areas, so that they can successfully continue their schooling. The K–12 national curriculum, learning outcomes and instructional programmes must be aligned with individuals' post-secondary aspirations and Qatar's needs for a skilled workforce.

Align education programmes and student needs

To support this initiative, the government will:
- Implement programmes to support less talented students.

Target
- Strengthen institutional capacity to cater to diverse student needs.

Improve student language, math and science skills at all K–12 levels

To support this initiative, the government will
- Review and incorporate best practices of teaching math, science and English in national curricula.
- Monitor and provide support systems for low academic achievers.

Target
- Increase the share of students approaching or meeting national standards in math, science and English.

Enhance the quality of education in private schools and attract outstanding schools to Qatar

To support this initiative, the government will:
- Assess the overall condition of private schools.
- Establish a national accreditation system for private schools.
- Test the accreditation system in private schools.
- Apply the accreditation system to all private schools after final refinement.
- Design a set of measures for attracting more outstanding schools.

Target
- Complete plans pertaining to developing and improving the quality of education in private schools.

Provide appropriate education options for children with special needs

Qatar has adopted inclusive policies for children with special needs. Schools are encouraged to accept these students, and more than half of schools are equipped to meet the needs of students with physical disabilities. Several institutions cater to students who cannot be taught in regular classrooms, offering these students the education needed to help them lead a meaningful life.

As the student population has grown, however, shortages have arisen in the provision of education and training to students with special needs. Few teachers in government schools have been trained how best to support such students, and experts who can assist students with moderate and serious disabilities are unavailable. Overall, increasing the capacity of specialized institutions would lower the pressure on mainstream schools and reduce waiting lists for existing specialized institutions.

Specialized system to ensure high-quality education for students with disabilities

To support this initiative, the government will:
- Evaluate the infrastructure of specialized institutions and facilities, including digital access, for students with disabilities, and develop capacity as needed.
- Develop specialized curricula for students with disabilities, in connection with defining a national curriculum for K–12 general education.
- Invest in faculty development for teaching students with special learning needs.
- Develop Qatari specialists to provide comprehensive services for students with special learning needs.

- Launch awareness campaigns for parents of students with special learning needs and for other students and society at large.
- Invest in the development of institutions to enhance teaching of students with disabilities, including identifying education and career pathways.

Targets

- Increase the share of schools equipped with infrastructure for students with disabilities to 80%.
- Increase the capacity of specialized institutions and the number of Qatari specialists able to work with students with special learning needs.

Increase awareness of skills required in future work environments

Qatar's K–12 system has only weak links with the labour market. Many students in general K–12 schools report a lack of information about the work environment; only two technical and vocational schools provide secondary education for students with technical and vocational inclinations.

One way to tackle this issue is to integrate compulsory technical and vocational elements in curriculum standards and the national curriculum. Initiatives can be as easy as tying textbook examples closer to the typical work environments in key professions. Also valuable would be internships, site visits, class presentations and workplace training to increase student exposure to work environments and raise awareness of work-relevant skills. Career counsellors in every school could guide students in making decisions about their academic and professional futures. Vocational schools should be accredited based on business needs.

Improved work skills and awareness of the world-of-work at preparatory and secondary levels

To support this initiative, the government will:

- Align the national curriculum with the objectives for creating effective participants in the knowledge economy.
- Encourage schools to hold workshops with key employers in Qatar to learn about their skill requirements and gaps in the skills of new graduates.
- Consider placing career counsellors in schools to advise students on education and career paths.

Targets

- Include work skills in the national curriculum, including implementing initiatives to foster student exposure to work environments.
- Operationalize work skills in the national curriculum and enhance the performance of academic and vocational guidance in school.

Improve parental, community and sectoral participation in K–12 education

In recent years, school performance has become more transparent to students, parents and the community—important for increased school choice. However, studies suggest that many stakeholders are not involved in school life or knowledgeable about it.

Schools need to engage stakeholders more actively, encouraging them to take an interest in school activities, participate in school bodies and take advantage of informal occasions for information exchange.

Beyond having Boards of Trustees since 2006, schools should disseminate information through the Internet in order to increase stakeholders' interest in school activities, enhance their participation in school committees and benefit from informal information exchange. They should publicize Board of Trustees and parent council policies and involve the public and private sectors in education, for example, by having agencies and institutions run some independent and private schools.

Increased school communication with parents, taking into account the education sector reform principles

To support this initiative, the government will:

- Develop a consistent communication approach at the Supreme Education Council and school level.

- Develop programmes to encourage community and parental involvement such as extracurricular activities for families, interschool sports events and cultural and academic competitions.

Targets
- Increase communication between schools and stakeholders.
- Increase parental involvement in schools and provide parents with information on student and school performance.

Formalizing public and private sector participation in education

To support this initiative, the government will:
- Take appropriate measures to increase quality, participation of all stakeholders in implementing the education and training sector strategy.

Target
- Increase stakeholder participation in implementing the education and training sector strategy.

Offer a broad range of basic education programmes for adults

While younger Qataris have enjoyed the education benefits made possible by economic growth and financial wealth, many older Qataris lacked access to education or did not regard it as important. Many of these older Qataris now regret their lack of education, and some have chosen to catch up through night school and other training and continuous education opportunities.

A range of measures can be introduced to support basic education for adults, a diverse group: more night schools, specialized learning centres and pathways into other education options. For adults who have lived well and had successful careers, programmes will recognize the sensitivities inherent in catching up on an education they should have received as children.

Flexible literacy and numeracy programmes for adults

To support this initiative, the government will:
- Offer additional literacy and numeracy programmes for adults beyond night schools—for example, in specialized centres—and create incentives for adults to attend.
- Create flexible pathways between vocational and general education programmes by offering equivalence tests enabling adults with a vocational education to gain a general education degree.

Target
- Increase the capacity and variety of institutions for adult education.

Improving higher education

Higher education institutions have a mission that extends beyond teaching students and conducting scientific research for the sake of developing knowledge. These institutions must identify social needs that could be met through education and research programmes that support government agencies, civil society and industry. Higher education institutions should encourage the university community—faculty staff, administrators and students—to interact with the broader Qatari society.

Higher education, the crucial link between the K–12 system and the labour market, has undergone large-scale reforms.

Since 2003 Qatar University has implemented a successful reform programme to, among other things, raise standards and grades, increase student engagement and improve teaching quality and staff morale. A critical aim is to meet the needs of a new generation of Qataris in support of Qatar's economic and social development.

Qatar Foundation's Education City continues to flourish as a centre of excellence in education and research, with a growing number of internationally renowned university campuses from Europe and the United States. It is inspiring young Qataris to achieve higher education attainment at the

secondary level and producing graduates of the highest international standards in support of *QNV 2030*'s aim of transitioning towards a knowledge-based economy. Education City universities offer a wide variety of specialties and are attracting a diverse group of students from all over the world.

Some areas still require attention, however. There is evidence that higher education does not optimize Qatari talent and capabilities:

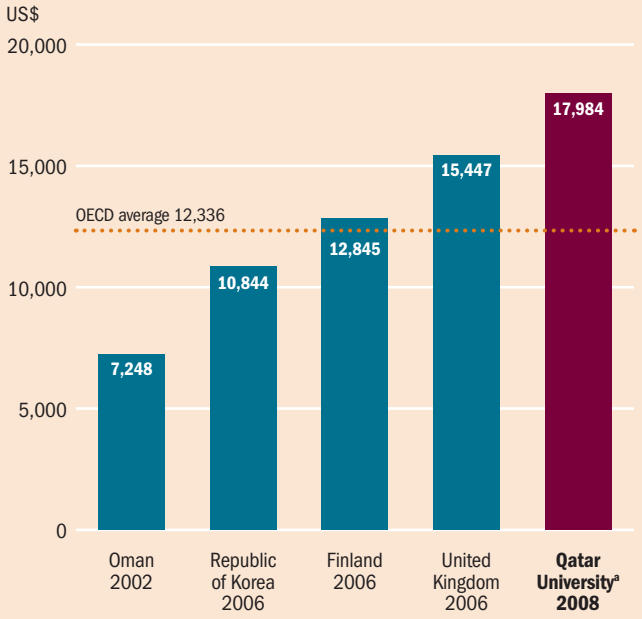
- Low enrolment rates and high dropout rates in the higher education system as a result of more attractive offers in the labour market or lack of sufficient qualification.
- Misalignment between the subject matter taught and abilities developed in K–12 and admission requirements for higher education—requiring many students to take one or two years of foundation courses before starting college to catch up in knowledge and critical thinking abilities.
- A mismatch between the qualifications students obtain in the higher education system and the needs of the Qatari labour market.
- Low-quality research output.

Prepare Qataris for employment in the knowledge economy

As the population grows, so does the potential for Qataris to take a more prominent role in the economy. Higher education is the means for delivering on this potential, by graduating Qataris capable of contributing to the sustainable development of the knowledge economy.

Investments in higher education have been considerable (figure 4.11). But higher education still falls short of its goals. Qatar has world-class institutions, but Qataris struggle to gain admission, as evidenced by their declining admission rates. Many students admitted cannot complete a degree, as evidenced by high dropout rates, particularly for men. Even university graduates are not well prepared to participate in the knowledge economy—because they lack access to a comprehensive set of courses or choose not to enrol in them.

Figure 4.11 Average annual expenditure on higher education per student is above the Organisation for Economic Co-operation and Development average



a. Excludes capital expenditures.

Source: OECD, *Education at a Glance* (2009); World Bank, *The Road Not Traveled* (2008).

Alignment between higher education and needs of a knowledge economy

To support this initiative, the government will:

- Conduct studies on workforce needs and assess the gap between education output and requirements.
- Launch a campaign aimed at increasing enrolment in courses suitable for a knowledge economy.
- Incentivize Qatari enrolment in knowledge economy courses.

Targets

- Increase the proportion of students graduating with qualifications needed in the knowledge economy by 65%–75%.
- Provide students with diverse post-secondary education pathways to meet labour market needs.

Feedback mechanism between higher education institutions and K–12 institutions and students

To support this initiative, the government will:

- Develop feedback reports on skill gaps.
- Identify higher education entities with information on student performance gaps.
- Develop monitoring mechanisms to track changes in the performance of higher education students.

Targets

- Establish feedback channels between K–12 and tertiary education.
- Reduce the proportion of Qatari students enrolled in Qatar University's Foundation Program to 50%.

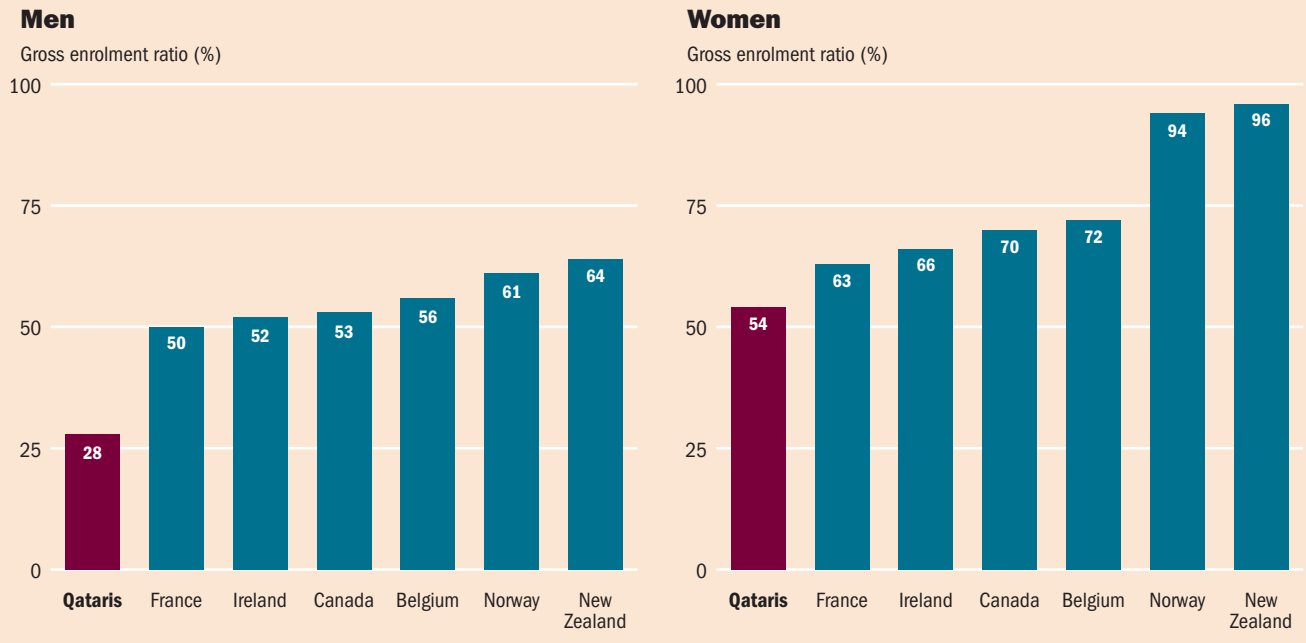
Offer alternative pathways to tertiary education

An equitable higher education system ensures all qualified students access to universities. Financial considerations should not determine admission decisions, and universities must ensure that admitted students are equipped to follow the curriculum and graduate.

Access to Qatar University was fairly open to Qataris until 2003, but more stringent entry requirements have since made admission difficult. Enrolment ratios have generally been low (figure 4.12). This is due not to a lack of capacity but to the shortcomings of the K–12 system in preparing students. The same is true for the international universities in Education City, whose admission requirements are even more stringent.

Because higher education is a main driver of a knowledge economy, Qatar needs to increase the number of nationals attending university. Approaches to increase participation range from reforms in K–12 education to greater access to alternative higher education options.

Figure 4.12 Gross enrolment ratios for tertiary education are low for Qataris, especially for men, compared with benchmark countries, 2006–2008



Source: UNESCO, *EFA Global Monitoring Report* (2009).

Extend education opportunities to students who cannot directly enter universities

To support this initiative, the government will:
- Establish a student-support office for students unable to gain admission to universities or complete higher education requirements.
- Undertake a feasibility study on alternative educational opportunities, such as adult education, part-time education, distance learning and study abroad.
- Provide required education opportunities based on the feasibility study.

Target
- Substantially increase the gross tertiary enrolment ratio to at least 30% for men and 56% for women.

Strengthening technical education and vocational training

Compared with other components of the education system, Qatar has not invested as much time and resources in technical education and vocational training (TEVT). Qatar needs to address the basic infrastructure and inputs for these educational offerings:
- A coordination mechanism to maintain the quality of institutions and programmes, ensure that course offerings meet labour market needs and student demand, and establish clear links between TEVT courses and labour market requirements.
- Additional capacity to fill clear institutional gaps (as in girls' secondary technical and vocational schools).
- Increased accountability, by raising social perceptions of the value of vocational training and professional development courses.

Develop an organizational model for technical education and vocational training and build needed capabilities

Qatar's TEVT sector needs strong institutions to ensure high-quality, appropriate and well managed offerings. The most important step is to consolidate current efforts to develop the sector and to establish a central body responsible for the institutional support necessary to raise the quality and reach of this segment of the education system.

Many countries have fully integrated TEVT into the education system, where it serves as a bridge to the labour market. Among other tasks, the central body could coordinate with the business sector, develop and maintain frameworks (such as a National Qualification Framework) and introduce quality standards.

Establish a TEVT supervisory body

To support this initiative, the government will:
- Define key functions, such as planning, quality assurance, oversight of a National Qualification Framework and occupational standards, benchmark against similar functions performed in comparable international institutions and determine a model appropriate for Qatar.
- Assess institutional capacity to support identified key functions.
- Review laws and policies that establish supervisory authority that extends government licensing of private sector TEVT.

Target
- Develop and implement an organizational model for TEVT.

Adopt a new model for accreditation and licensing

To support this initiative, the government will:
- Benchmark international best practices.
- Develop licensing criteria for current and new institutions.

Target
- Define and implement a quality assurance system for TEVT institutions and programmes.

Develop a regulatory framework to align technical education and vocational training with the education sector and labour market needs

The Supreme Education Council has strict quality assurance guidelines for education and training providers. For example, TEVT institutions, such as the Community College of Qatar, the CAN-Q and Qatar Petroleum Training Institute, must provide graduates with internationally accepted degrees.

As the education and training system has grown, parallel but conflicting qualification models and titles have emerged. The confusion makes it hard to transition flexibly between education and work. Pathways must be built to the education system, through a National Qualification Framework, and to the labour market, through clearly defined occupational standards that can be addressed by the education system.

National Qualification Framework

To support this initiative, the government will:
- Appoint an oversight body and determine the organizations and process model needed to conduct assigned functions.
- Determine the scope of the National Qualification Framework.
- Decide on the reference model and structure for the National Qualification Framework.

Target
- Define and implement standards for a National Qualification Framework with all stakeholders.

Occupational standards and oversight body

To support this initiative, the government will:
- Build on the existing Supreme Education Council vocational education training initiative in deciding on international standards to be adopted by Qatar.
- Customize occupational standards.
- Appoint an oversight body and determine organizations and process model.

Target
- Develop and implement a system of occupational standards for relevant professions.

Align technical education and vocational training programmes and outputs with the needs of society and the labour market

Qatar has a strong base of education and training institutions and programmes that cater to the needs of the economy and the labour market. But to ensure that TEVT programmes adequately meet these needs, market gaps must be closed, and different qualification models and titles reconciled.

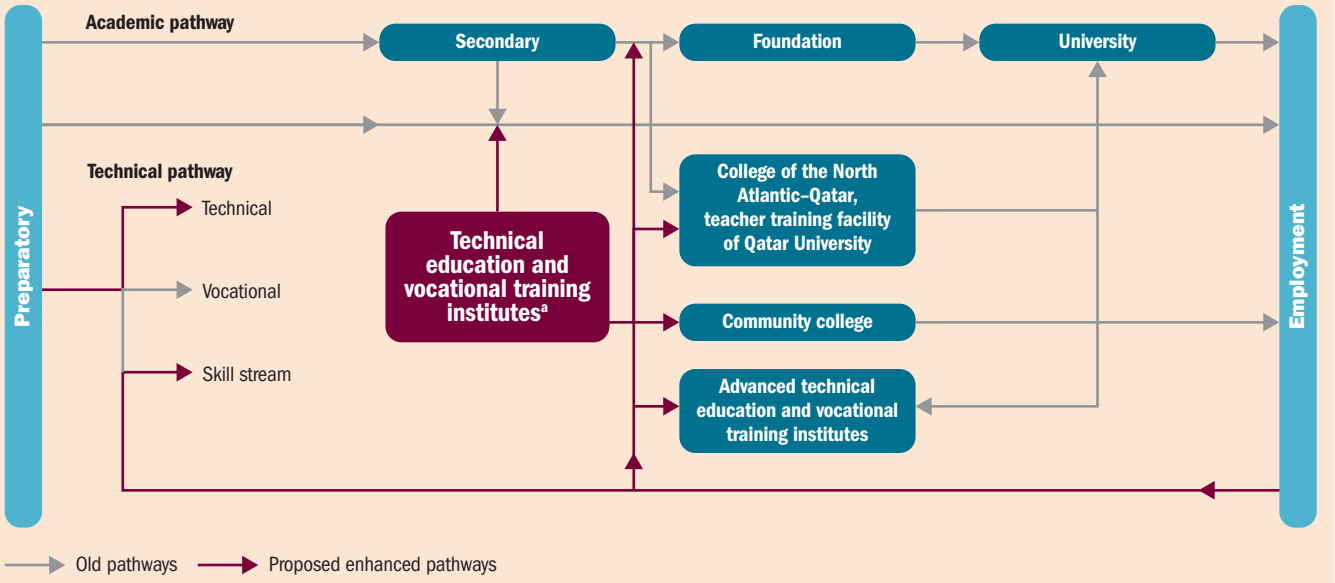
Gaps are most noticeable at the secondary level, where technical and vocational programmes are missing, especially for girls. But capacity and access problems also characterize post-secondary programmes and institutions. Developing a productive workforce and society requires matching programmes to student interests and capabilities and preparing graduates for professional and social life. It will be important to provide more technical and vocational pathways to employment, especially for those students who are not academically oriented or unable to meet the admission criteria of universities (figure 4.13).

Plan to develop differentiated TEVT programmes aligned to labour market needs

To support this initiative, the government will:
- Determine and prioritize needs for the different types of TEVT.
- Develop an implementation plan.

Target
- Develop and implement a plan aligning TEVT programmes with the needs of the labour market.

Figure 4.13 Qatari students need more technical education and vocational training pathways to employment



a. Technical education and vocational training institutes have limited enrolments and are restricted to men.

Plan for industrial partnerships to further develop TEVT

To support this initiative, the government will:
- Conduct a benchmarking study on best practices related to TEVT partnerships.
- Determine key areas and projects for TEVT partnerships with industry.
- Integrate partnership into the regulatory framework.

Targets
- Develop a industry partnership model accepted by all stakeholders.
- Establish a first industry partnership according to model.

Increase the prominence of technical education and vocational training programmes

TEVT institutions and programmes frequently prepare students directly for professional activities. Because of this responsibility, the reputation of these programmes needs to be elevated. Rather than be considered second-rate education options, they should be seen as a centrepiece of professional careers. This change would increase enrolment and better prepare Qataris for the labour market.

To promote a positive perception of learning and achievement in the student body, a first step is to disseminate regular information about TEVT opportunities and the relevance of TEVT programmes. This effort will inform both students and employers of TEVT opportunities and how TEVT programmes prepare students for jobs and careers.

Plan to increase awareness of TEVT programmes

To support this initiative, the government will:
- Conduct an international and regional best practices benchmarking study and determine an awareness programme suitable for Qatar.
- Implement an awareness programme.

Target
- Improve information and perceptions about TEVT programmes.

Effective incorporation of TEVT into career guidance

To support this initiative, the government will:

- Develop a TEVT career counselling system, including the necessary legislative and regulatory systems.

Targets

- Incorporate TEVT options into career counselling.
- Reduce TEVT dropout rates.

Enhancing scientific research

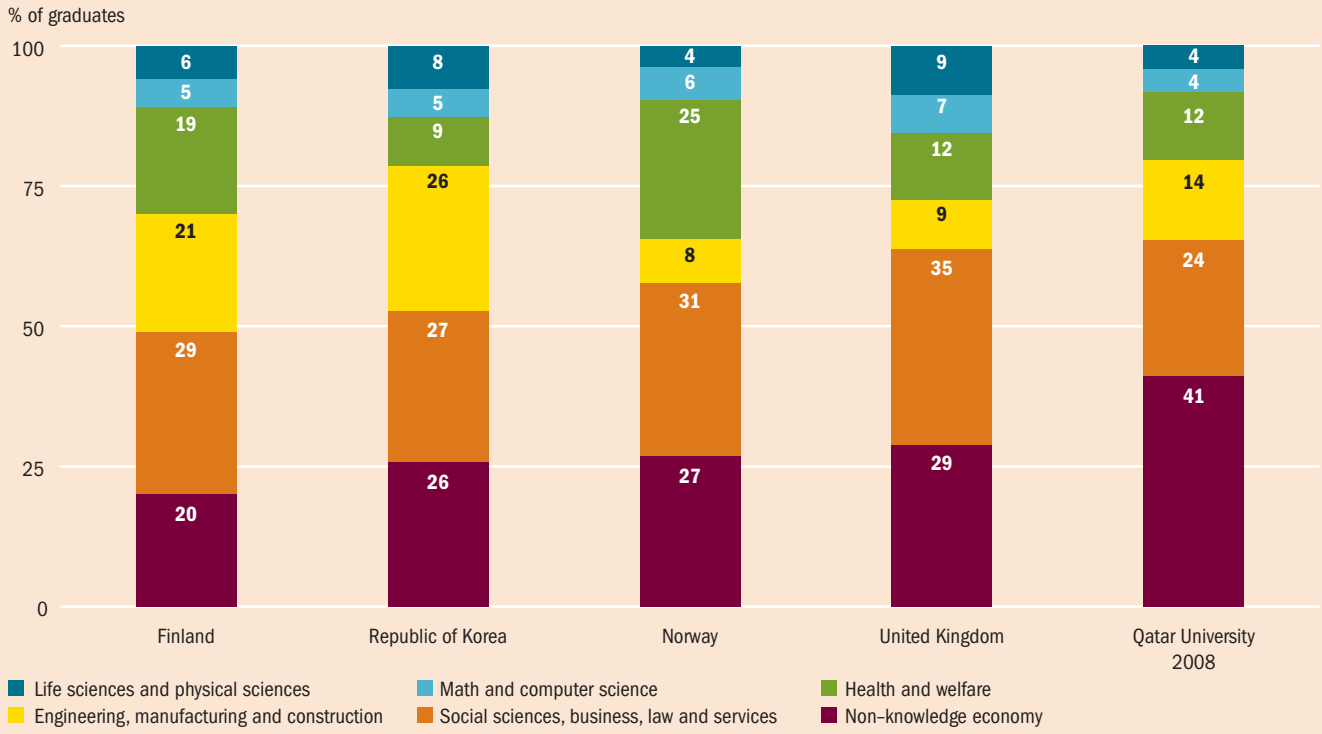
Qatar has recently invested considerable resources in research and development. An outstanding infrastructure is in place for scientific research, with programmes to draw potential researchers and build partnerships with universities and businesses. Now Qatar must use these resources effectively to attract more high-quality researchers, and graduate more students in knowledge economy fields (figure 4.14), to produce substantive research results. While graduates from Education City universities are much more concentrated in knowledge economy subjects than those from Qatar University, they comprise a small proportion of the total graduate population.

Achieve a higher level of scientific innovation

In recent years, Qatar, through the Qatar Foundation, has invested heavily in developing capabilities for scientific innovation and research. Some examples:

- The establishment of a broad range of research centres within Qatar University and Education City, including research opportunities in scientific and technical areas; policy, social and business areas; innovative design and culture and heritage.

Figure 4.14 Qatar needs to increase the proportion of science and math graduates



Note: Following Organisation for Economic Co-operation and Development (OECD) definitions, the humanities are considered non-knowledge economy subjects. Data cover tertiary type A and advanced research institutions for OECD countries. Qatar University graduates are used as a proxy for Qatar since Qatari enrolment in Qatar University accounts for about 90% of Qatari enrolment in higher education.
Source: OECD, *Education at a Glance* (2009); Qatar University, *Book of Trends* 2008–09 (2009).

- The acceleration of quality research and development through the Qatar National Research Fund, established in 2006, which takes a broad approach in providing research grants to a wide range of beneficiaries.
- The establishment of the Qatar Science and Technology Park in 2009, which has already attracted investments from several international businesses for frontier research and development.
- Competitive mechanisms for funding researchers and institutions.
- Education programmes on research at the university and K–12 level, such as the Undergraduate Research Experience Programme and research programmes and specialized math and science tracks in secondary schools.

Gaps in research and development support, particularly in prioritizing research funding and establishing mechanisms for commercialization, are hindering scientific innovation. As a result, productivity indicators are low compared with international benchmarks.

Productive and effective scientific and research system

To support this initiative, the government will:
- Define national priority areas for research and partnership opportunities.
- Develop an awareness project on research opportunities in Qatar targeted at potential researchers.
- Introduce mechanism to facilitate commercialization and practical application of research outputs.
- Revise the framework of laws and regulations relating to intellectual property and scientific research, based on a review of international best practice.

Targets
- Develop a national strategy defining priority areas for scientific research and development.
- Increase the number of scientific research publications and patents.

Implementation challenges

The success of the education and training initiatives of the National Development Strategy 2011–2016 will depend on political leadership and resolve at high levels. Success will also depend on implementing a comprehensive and integrated approach, both vertically within the education and training sectors and horizontally across sectors (education, training, labour market, family, social protection and so on).

The proposed reforms entail more than management changes. They involve considerations of national values and identity. Achieving them will require consensus among all stakeholders.

Fostering cross-sectoral links

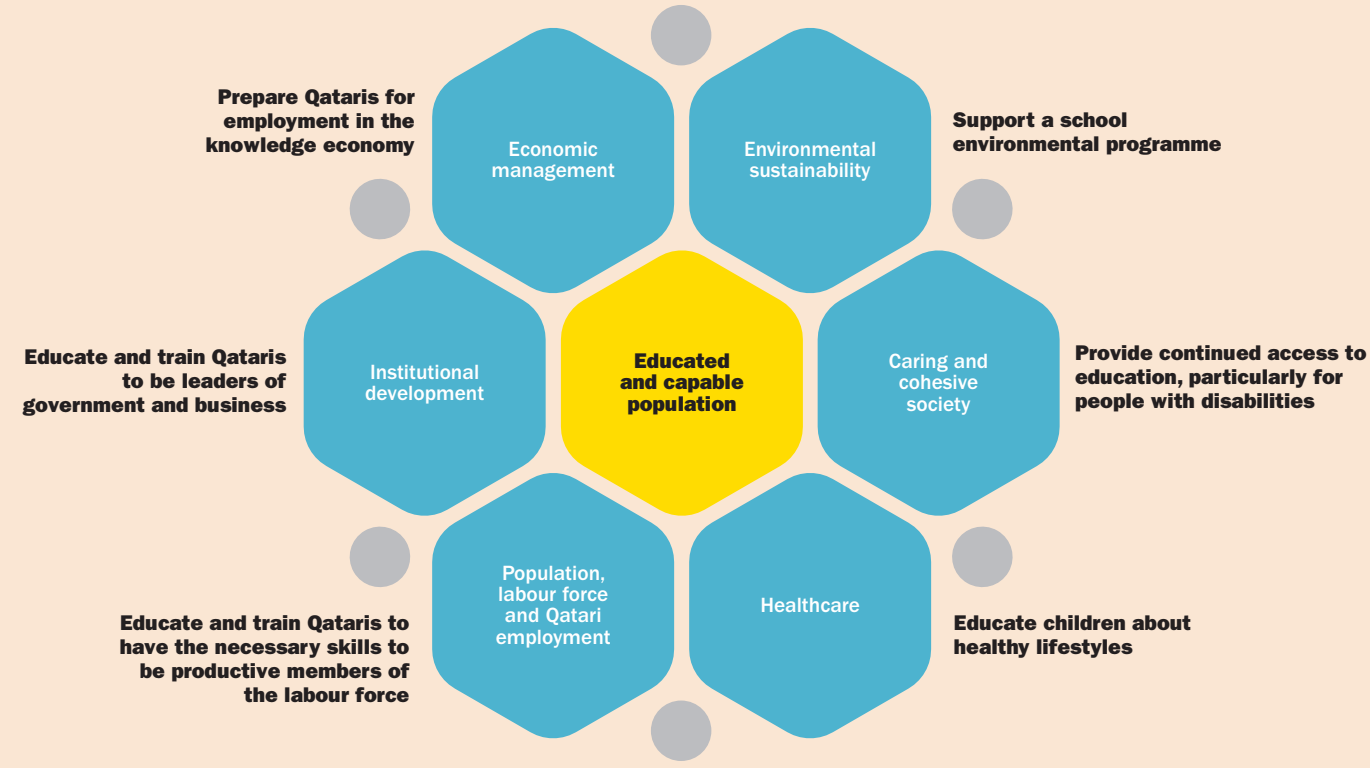
The strategy for education and training incorporates inputs from stakeholders in the education and training sector and beyond. The process for developing the strategy was highly inclusive, based on numerous personal interviews and more than 30 meetings of sub-task teams. This high stakeholder participation and buy-in distinguishes development of the current strategy for education and training from past efforts. But the ultimate measure of success is the degree of implementation.

Success also depends on collaboration outside the sector (figure 4.15). The most critical areas of cross-sectoral linkage are the labour force and a caring and cohesive society. These three sectors are interdependent, with each relying on the others' outputs.

Figure 4.15 Education and training are both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for education and training

Education and training as an enabler for other sectors



Fostering a capable and motivated workforce

"Qatar must choose a development path that is compatible with the targeted size and quality of expatriate labour that are determined by Qatar's leadership and people."
—Qatar National Vision 2030

Transforming Qatar into a diversified knowledge economy with increased private sector participation depends on upgrading and deepening the education, knowledge and skills of Qataris. Aligning these economic objectives requires a transition from the current low-skilled, low-productivity and low-wage economy to a high-skilled, high-productivity and high-wage economy.

A high-skilled and capable workforce is crucial for achieving a modern, diversified economy and for modernizing public sector institutions. There are strong positive returns associated with an additional year of post-secondary education, but many Qataris do not pursue a diploma or higher education. While this could be due to a lack of awareness of the value of education, increasing the realized returns will likely encourage Qataris to stay in school longer and raise their level of performance. Creating a more productive, skilled and motivated labour force requires major labour market reforms, especially for incentivizing Qataris to participate in the private sector and to take advantage of higher education and training opportunities.

The labour market is highly segmented, with heavy concentrations of Qataris in the public sector and expatriates in the private sector, especially in construction and services. While skill development and more effective labour force participation by Qataris are essential, so is establishing the regulatory and legal frameworks needed to attract and retain a skilled expatriate workforce to support the nation's development vision. *QNV 2030* acknowledges the importance of expatriate workers: "For the foreseeable future, Qatar will not have a sufficient number of citizens to manage the complex systems, infrastructure and other requirements of a rapidly growing, diversifying and technologically sophisticated economy."

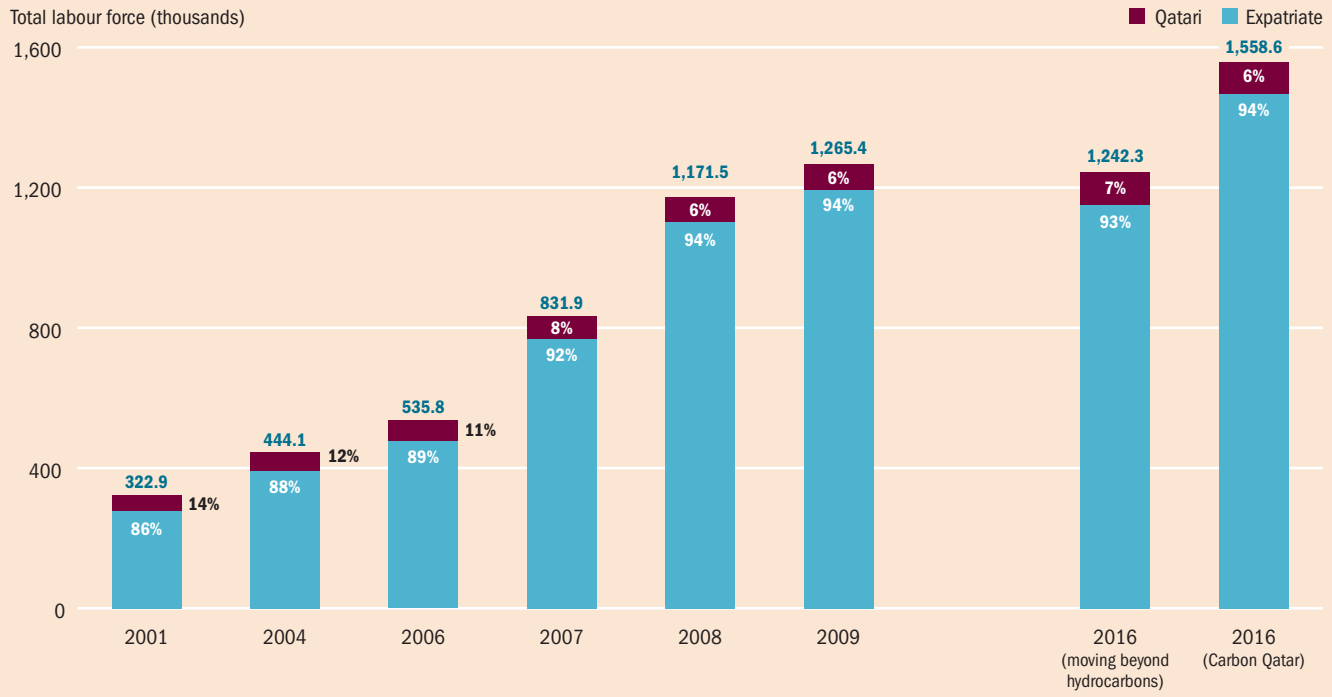
Qatar's economic structure has not changed markedly in recent years at the aggregate sectoral level, but there has been a notable increase in the share of construction, and transport and telecommunications. And while the composition of output has also remained fairly stable, activity has increased rapidly, with an average real annual growth rate of around 17% over 2004–2009 (see chapter 3).

As in many resource-rich economies, the private sector in Qatar has thus far played a limited role. Estimates of the private sector share of aggregate output put it at around 35%. However, the private sector has a much bigger profile in employment, with large numbers of workers, predominantly expatriate, in construction and retail trade. These two sectors have expanded markedly as a result of both mega-infrastructure projects and rising consumption demand from a rapidly growing expatriate population, more than halving the share of Qataris in the labour force from 14% in 2001 to 6% in 2009.

Moving forward, there are two broad options for the economy, each with consequences for labour force competition. If the economy continues to rely heavily on hydrocarbons to fuel mega-development projects, with productivity levels unchanged, some 1.6 million workers will be needed by 2016. If reliance on hydrocarbons decreases, Qatar will need just 1.2 million workers in 2016—much the same as in 2009 (figure 4.16).

QNV 2030 anticipates increased and diversified Qatari participation in the labour force through investment in education and training, incentives for professional and managerial occupations in all sectors and measures to encourage more Qatari women to enter paid employment. It supports measures to improve high school education outcomes and expand participation in post-secondary education and lifelong learning.

Figure 4.16 Qataris as a share of the labour force, actual and projected under two scenarios, 2001–2016



Challenges for the labour market

Qatar is seeking a development path compatible with a targeted size and quality of expatriate labour. In moving in that direction, Qatar will continue to weigh the economic benefits of greater numbers of expatriate workers against the costs of meeting their health, education, housing and public service needs, including those of their dependents residing with them, and the impact on national identity and culture.

Success will depend largely on whether incentives and regulatory policies can transform the private sector into a high-productivity, high-wage economy and whether Qataris compete for work in the private sector. Both progressively rebalancing immigration policies and encouraging higher value-added and capital-intensive employment are needed.

Current employment sponsorship rules are affecting Qatar's labour market:

First, open sponsorship rules provide an incentive to recruit low-cost expatriate workers and a disincentive to Qatari employment and automation. High levels of immigration tend to create a low-wage, labour-intensive, low-productivity economy. The cost of importing low-skilled expatriate workers is heavily subsidized.

Second, the sponsorship programme constrains the mobility of expatriates and thus their ability to respond to labour market signals. A rigid labour market hampers the development of a workforce commensurate with aspirations for a knowledge economy.

Despite rapid economic development and efforts to improve male education, labour force participation rates of Qatari men are low and declining —with men leaving the labour force at a young age. There are significant challenges to increasing effective male participation in the labour force. More men need to continue on to tertiary education, and education attainment levels need to rise.

Currently, Qataris have little incentive to excel in education and training.

By contrast, labour force participation of Qatari women has grown sharply in recent years, consistent with their rising education levels and the ready availability of low-cost domestic help. There is considerable scope for participation to rise further, as it still lags well behind that of many high-income countries.

In recent years, Qatari unemployment rates have been exceptionally low. The unemployed are primarily first-time job-seekers, people with a strong preference to work in a particular sector and disproportionately women. There are, however, concerns with underemployment and falling labour productivity.

Qatar's public sector leads in employment of Qataris and is the sector of choice for new labour market entrants. The efforts of the public sector to increase the participation of Qataris are reinforced by affirmative employment policies in all other sectors.

For example, the energy industry, under the leadership of Qatar Petroleum, has been at the forefront of promoting Qatari participation in the mixed and private sectors. The industry recruits young high school graduates, sponsors them through scholarship programmes in vocational and university training and provides rapid career development paths, including in-house training. These recruits enter a wide range of positions within the industry—in operations, maintenance, engineering, finance and administration, and human resources.

Realizing *Qatar National Vision 2030* for a capable and motivated workforce

To realize the *QNV 2030* goal of a capable and motivated workforce, young Qataris need to be motivated to take advantage of the many post-secondary education and training opportunities. Qatar will move from establishing numerical targets for employment of Qataris to emphasizing price- and market-based mechanisms that link wages with productivity. The primary driver for these changes is improved education outcomes.

Entrepreneurial development of Qataris, especially of youth and women, will be encouraged to increase their involvement in the private sector. Barriers to entrepreneurship will be studied and initiatives launched—including strengthening incentives, increasing business training and building capacity—at home and abroad in areas relevant to labour market needs. Increasing the participation of Qataris in the private sector and reducing their dependence on public sector employment will entail narrowing the gaps in social allowances and conditions of work.

A critical question is how much the wage gaps between Qataris and expatriates and between public sector and private sector workers need to narrow to encourage substitution. Public sector (public administration, government companies and the mixed sectors) wage, salary and social allowance packages, including pension schemes, will be reviewed, with a view to identifying policies to encourage Qataris to remain in the labour market and increase their participation in the private sector.

Training programmes will be demand oriented and revised to meet priority needs with attention to content, quality and accreditation. Expanding the role of employment services, such as labour exchanges, will reduce mismatches between labour supply and demand. Similarly, to cope with the dynamic needs of changing labour markets, the government will offer incentives to employers and employees for lifelong learning through retraining.

Policies on immigration, regulations, sponsorship and licensing will be reviewed and revised to create a more strategic demand for expatriate workers in line with the aim of recruiting and retaining the right mix of expatriate labour. Qatar's labour laws will be revised, as necessary, to protect further the rights and safety standards of all expatriate workers within a comprehensive social protection framework and within international norms and standards. Career planning and professional

programmes for targeted expatriates are critical in a knowledge economy, so that expatriates can effectively mentor and train young Qataris in all sectors.

The 2009 Law on Human Resources Administration will be reviewed and revised to reduce the discouraging effect on labour force participation and on the recruitment and retention of the expatriate labour force.

Coordination mechanisms between and within education and labour authorities will be improved to enhance administrative processes and statistical systems. For example, the reasons for relatively low outcomes in the education and training system will be examined. Improved links with the labour market are also required. An example is school modernization and development, including ICT enhancement, curriculum reform, career guidance and job counselling.

To help realize national labour market goals, the government proposes major reforms over 2011–2016 to promote human capital development for sustainable economic growth and to enable the transition to a knowledge economy. The government also aims to increase labour market efficiency in matching labour supply and demand in the public and private sectors.

The reform measures will contribute towards eight labour market sector outcomes.

- Expanding high-quality training opportunities for Qataris.
- Incentivizing Qatari private sector employment.
- Boosting labour force productivity.
- Attracting and retaining high-quality expatriate talent.
- Nurturing and managing human resources.
- Improving labour market flexibility.
- Strengthening evidence-based policy-making.
- Enhancing employment and career counselling services.

Ambitious targets set for each of these outcomes require early, effective and sustained implementation of the reforms and associated measures if they are to be met by 2016.

Expanding high-quality training opportunities for Qataris

The proportion of Qataris in the labour force is low, but *QNV 2030* envisages that they will help sustain the economy through increased labour force participation, especially in senior positions. Stronger skills (technical and noncognitive), especially when aligned with labour market needs, will enable greater and more effective labour force participation by Qataris.

A modern public sector requires a high-skilled, capable workforce. Yet unskilled and semiskilled workers as a proportion of Qatari employees is highest in the public sector (table 4.1). This skill mismatch, along with other features of public sector employment (particularly the social benefits), has reduced incentives for Qataris to improve their skills and education.

Private sector employers are discouraged by the skill level, work attitudes and motivation of new Qatari entrants into the labour market. The performance of current private sector employees is likely to influence hiring choices and to determine employability in the private sector.

The lack of adequate skills in the labour force is a challenge that must be addressed through skills upgrading for Qataris designed and implemented primarily through public and private institutions. Because not all Qataris will pursue an academic education, they need opportunities to develop technical skills through vocational training. The share of enrolment in technical education and vocational training at the secondary level is below that of international benchmarks (table 4.2).

Skill upgrading programme for Qataris

To achieve this outcome, the government will:

- Upgrade skills in the public sector to improve institutions and administration for the country.

Table 4.1 Among employed Qataris, the highest share of unskilled are in the government sector and the highest share of highly skilled in the private sector, 2009 (%)

	Sector				
Skill level	**Government**	**Government corporation**	**Mixed**	**Private**	**Total**
Qatari employment (%)					
Highly skilled	52	42	64	75	53
Skilled	31	50	33	25	34
Semiskilled	2	7	2	0	3
Unskilled	15	1	0	0	11
Total	**100**	**100**	**100**	**100**	**100**
Expatriate employment (%)					
Highly skilled	39	58	45	13	17
Skilled	12	18	32	16	16
Semiskilled	14	14	15	49	46
Unskilled	35	10	8	22	21
Total	**100**	**100**	**100**	**100**	**100**
Qataris' share of total employment (%)					
Highly skilled	62.3	14.7	20.7	1.7	15.8
Skilled	76.5	39.4	16.1	0.5	11.1
Semiskilled	14.5	11.0	2.8	0.0	0.4
Unskilled	34.3	2.3	0.0	0.0	2.9
Total	**55.1**	**19.2**	**15.6**	**0.3**	**5.6**

Table 4.2 Enrolment in technical education and vocational training at the secondary level as a share of total in Qatar is very low compared with most benchmark countries, 2008 (%)

Country or group	**Tertiary education**	**Secondary education**	**Preparatory education**
Gulf Cooperation Council average	14	7	1
Bahrain	8	33	0
Kuwait	0	4	1
Oman	12	0	0
Qatar	**19**	**2**	**0**
Saudi Arabia	15	1	6
United Arab Emirates	28	1	0
OECD average	14	45	3

Source: UNESCO Institute for Statistics, Education data set (2010).

Qatari public sector employees must be encouraged to upgrade their skills. The government will enhance long-term training opportunities for public sector employees by increasing training options and scholarships and by communicating these opportunities more broadly. To increase the demand for in-service training and skills upgrading, staff annual performance assessments will take into account participation and performance.

- Improve skills in the private sector to promote a more diversified economic role for Qataris. The involvement of private sector actors in the design, implementation and provision of training is a key tool for matching the supply of and demand for skills in the private sector and for

understanding the private sector's needs. The discouraging effect of the cost of training on the willingness of private companies to hire Qataris must be considered. Mechanisms, such as on-the-job training opportunities, will be put in place to facilitate skills transfers between high-skilled foreign employees and promising Qataris.

- Expand access to vocational training to improve the skills of the new entrants at different education levels and for more disadvantaged groups. A vocational training programme should be available for Qatari youth, particularly the unemployed, women, people with disabilities and other disadvantaged groups, to promote their fuller labour market participation. Training will be diversified in close collaboration with other skills-upgrading programmes and with public and private sector employees. The programme will be based on an assessment of the available domestic supply of expertise, as well as of the skills needed in the market.
- Strengthen leadership skills in the private and public sectors so that Qataris are a driving force in the country. Qataris who show interest and aptitude in holding senior positions will receive the tools to develop strong and effective leadership through a more coordinated skills training programme.

Target

- Increase the labour force participation rate of Qatari men and women ages 20–59 with a secondary education or below.

Incentivizing Qatari private sector employment

Qatar's private sector constitutes a small share of the economy but has a big profile in employment —employing almost 80% of the workforce in 2009. Only 5% of Qataris work in the private sector, well short of the 15% target for 2016. Of the 87% of Qataris employed in the public sector, 71% work in government administration and 16% in government-owned companies.

Qatari entrepreneurship is also limited. Only 2% of Qataris manage and invest in their own businesses.

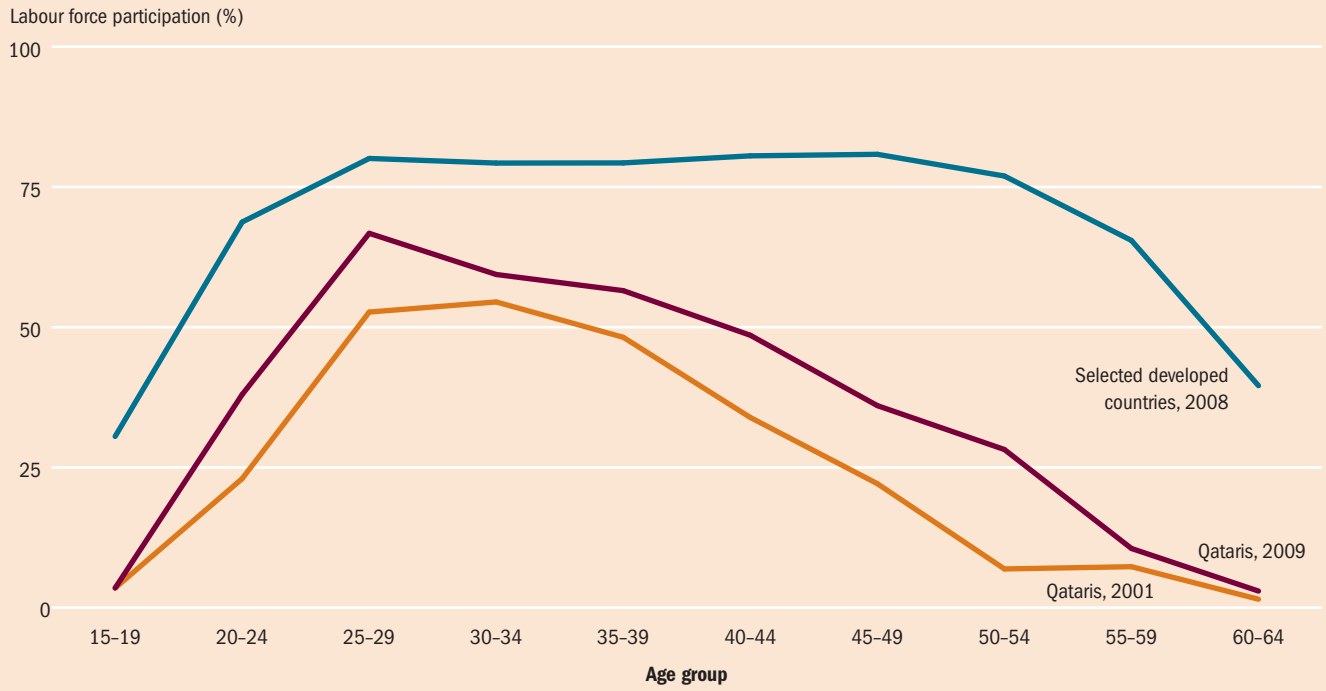
Since 2001 labour force participation has risen rapidly among Qatari women, but levels are still well below those in more developed countries (figure 4.17). Women are even more reluctant than men to enter private sector employment, mainly because of cultural and working environment factors. Public sector employment is better paid and rewarded than private sector work.

Comprehensive programme for private sector participation of Qataris

To achieve this outcome, the government will:

- Establish an entrepreneurship initiative targeting youth and Qatari women. The initiative, building on the experience of the Rhouda Centre and Enterprise Qatar, will study barriers to entrepreneurship, introduce a business plan competition and encourage internships in domestic, regional and international enterprises. A comprehensive programme is needed to attract Qatari youth to entrepreneurship. Internships and business plan competitions can provide guidance and augment interest in entrepreneurship.
- Lower attitudinal barriers to women's employment in general and in private companies in particular. The government will conduct a study to explore the barriers to Qatari women's employment and to provide incentives to employers in industries preferred by Qatari women.
- Reduce differentials in compensation between the public and private sectors. Various options could be considered, such as increasing employment and benefit packages for Qatari employees in the private sector. The same social benefits, including land and housing entitlements, could be provided to Qataris in the public and private sectors. Costs would be low because few Qataris work in the private sector, and one major barrier to private sector employment would be removed. Another option would be for the government to incentivize private companies to hire Qataris by subsidizing training costs, though the amount of such subsidies would need to be carefully determined and the effects monitored. A study will be conducted to determine which options best meet Qatar's needs.

Figure 4.17 Labour force participation rates of Qatari women have risen rapidly but remain below those in selected developed countries



Source: ILO, *Economically Active Population Estimates and Projections*, 5th edition (2009).

Target

- Increase the proportion of Qataris in the private sector from 5% to 15%.

Boosting labour force productivity

Qatar aims to move towards a high-productivity labour force that is adequately rewarded to encourage high rates of participation by Qataris. Productivity will be a critical driver of Qatar's transition from a hydrocarbon-based economy to a knowledge economy. More use of high-skilled labour and more capital investment by firms will support the transition to more technologically advanced methods of production and higher labour productivity.

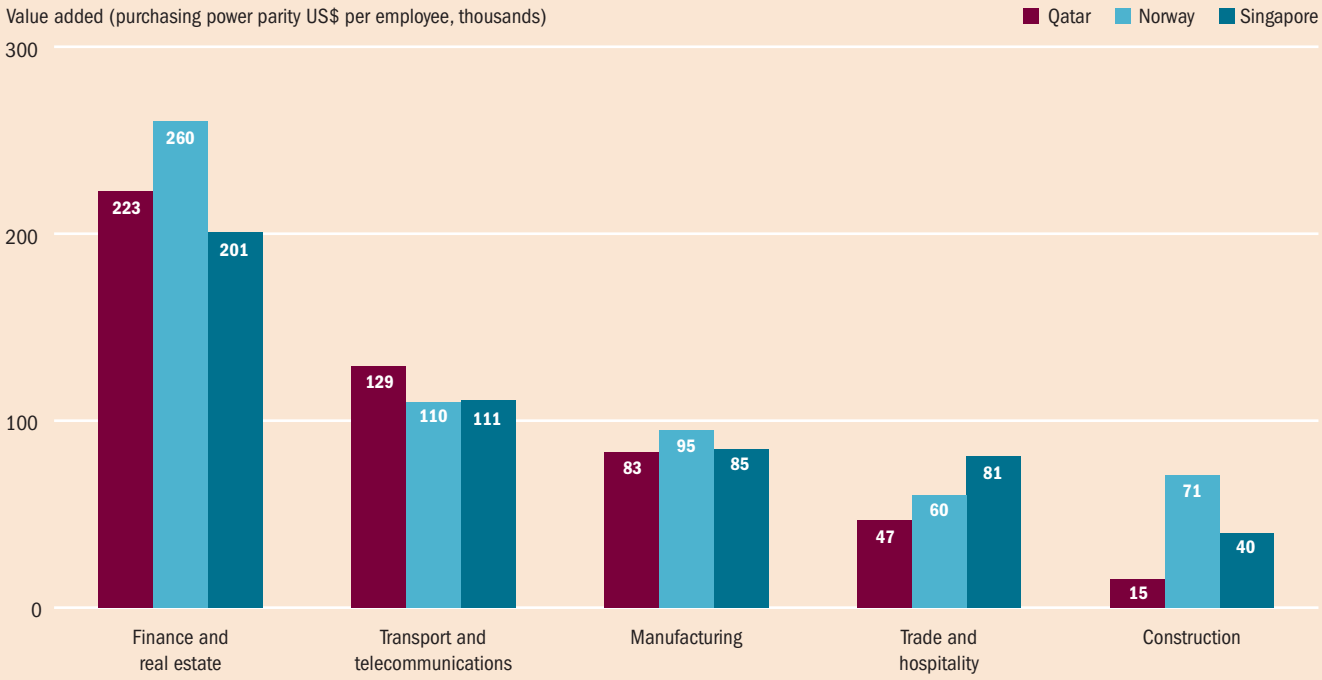
Labour force productivity (growth of output per worker) in Qatar compares well with benchmark countries in knowledge-intensive sectors, but is below them in labour-intensive sectors (figure 4.18). Further, overall labour productivity has been declining in recent years. Employers have taken full advantage of an open-door immigration policy that makes an almost inexhaustible supply of unskilled and semiskilled labour available at international wage rates. This has undermined incentives for investment in capital equipment and the use of more highly skilled labour, which would reduce overall demand. Without reducing the supply of low-cost workers or increasing the attractiveness of capital investments and high-skilled labour, the economy will struggle to reach its economic diversification aspirations.

Labour productivity strategy

To achieve this outcome, the government will:

- Improve the attractiveness of high-skilled labour to employers, by making employers pay the costs of unskilled labour, including adopting compulsory health insurance and setting minimum wages. Other labour-importing countries are using policy instruments to control the entry of expatriate workers.
- Improve access to capital, by reducing capital costs through subsidies or targeted lending programmes.

Figure 4.18 Productivity in selected sectors in Qatar compares well with that in benchmark countries, but not in construction and services, 2009



Source: IMF database (2010); Statbank Norway (2010); Statistics Singapore (2010).

- Prepare a communications and change management plan to ensure buy-in from all stakeholders. The communications plan will allow employers and expatriate workers to prepare for the changes, smoothing the economic transition and supporting faster improvement in labour productivity. It is especially important that the plan address employer concerns about the introduction of levies or a points system.

Target

- Improve Qatar's global ranking in labour productivity from 35th to 29th.

Attracting and retaining high-quality expatriate talent

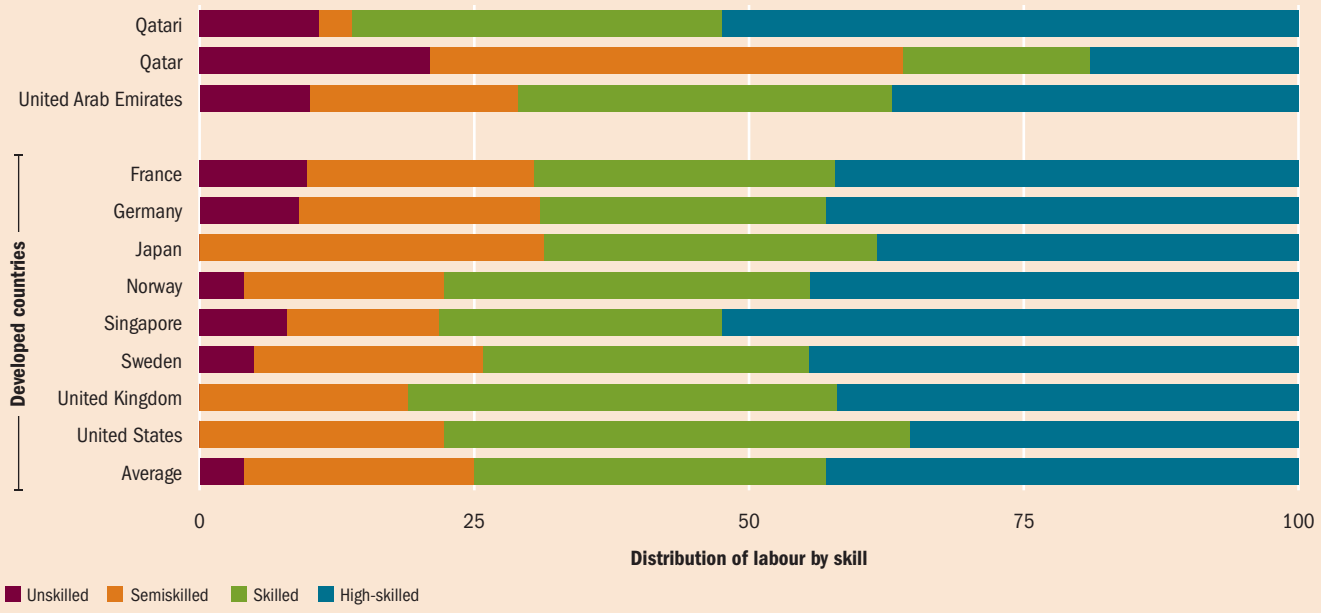
The transition to a more diversified economy requires more high-skilled labour and less low-skilled labour (figure 4.19). Due to the size of Qatar's economy relative to its population, a significant share of high-skilled workers will have to be expatriates. *QNV 2030* advocates attracting and retaining the proper mix of skills, with appropriate incentives and institutional arrangements for ensuring the rights and safety of expatriate labour.

Qatar has attracted low-skilled labour for its infrastructure boom, but requirements differ for attracting and retaining high-skilled labour. Employers identify recruiting and retaining skilled labour as a constraint to doing business, in part because of regulations and some restrictive employment practices. Many issues arise from limitations imposed by employment contracts governed by the 2009 Law on Human Resources Administration. Turnover is substantial among high-skilled labour, especially in the health and education sectors.

The rising proportion of expatriate workers in the past decade has created considerable risks, including to the economy, should a major crisis force expatriates to leave.

In order to satisfy the demand for skilled expatriate workers, Qatar needs to create incentives, through

Figure 4.19 Qatar needs to shift its employment distribution towards a higher share of skilled labour, 2008 (%)



Source: ILO, LABORSTA, Labour Statistics Database (2008).

improved working and living environments, especially the provision of appropriate schooling, to attract and retain the right mix of skills.

Comprehensive programme for recruitment and retention of expatriates

To achieve this outcome, the government will:

- Implement a recruitment and retention programme, including a review and revision as may be necessary, of Qatar's sponsorship system. The programme will incorporate perspectives from employers and employees, including an evaluation of the 2009 Law on Human Resources Administration. An intersectoral coordinating body will connect expatriates and public and private institutions and respond to concerns. Qatar will consider a programme of permanent residency for expatriates who meet predetermined criteria. It will also establish a tribunal resolving labour disputes.

Legal and regulatory support for labour rights, including passing new laws and signing international conventions, will be important for dealing with labour rights issues, such as occupational safety working conditions and access to the legal system. Improving labour rights will not only benefit employees but will also enhance Qatar's global image as a leading and progressive nation.

Targets

- Increase the proportion of high-skilled foreign labour from 17% to 23%.
- Increase the number of International Labour Office conventions signed from 6 to 20.

Nurturing and managing human resources

Making headway on the transition towards a knowledge economy requires changes in employment patterns. The large projected decrease in construction jobs (from 44% of employment in 2009 to 27% in 2016), along with other anticipated changes, will need to be addressed by national institutional and regulatory bodies. The 2009 Law on Human Resources Administration calls for programmes to support labour force planning. Education and training programmes must meet the needs of the

workplace. There are strong positive returns associated with an additional year of postsecondary education, for example, but Qataris often do not pursue diploma or degree courses. While this could be due to an underestimation of the returns to education, increasing the realized returns should encourage more Qataris to pursue a higher education.

Human Resources Master Plan for identified sectors

To achieve this outcome, the government will:

- Coordinate an annual training and development plan for the public sector, through the General Secretariat of the Council of Ministers, that calls on government entities to structure staffing in accord with actual needs. This requires a forward looking perspective on the employment needs of both Qataris and expatriates.
- Prepare a Human Resources Master Plan to coordinate the needs of the economy, government strategy and the labour market, which has become more diversified, and to inform stakeholders of the direction in which the labour force is moving. The master plan will identify bottlenecks and define required labour force skills and capabilities by sector, the type of higher education and training needed and the appropriate mix of expatriate workers for each sector. In defining the required number and type of employees the government will combine the perspectives of the Ministry of Labour, industry leaders (such as Qatar Petroleum) and government sectoral leaders (such as the Supreme Education Council) and publish an action plan for Qatar's future labour force requirements. Associated education and training requirements will also be defined. The Master Plan will:
  - Delineate labour force needs by sector in the short and medium term.
  - Specify the education and training requirements to meet Qatari labour force needs.
  - Describe the expatriate labour required by the economy.
  - Include a management strategy for maintaining the relevance of the Master Plan.

Target

- Implement a comprehensive Human Resources Master Plan.

Improving labour market flexibility

The rapid growth of Qatar's economy has created many challenges for labour market policy and the institutions that formulate the policies.

An efficient labour market can reduce transaction costs for employers and encourage talented workers to come to Qatar—and remain there. Public sector employment is regulated by the 2009 Law on Human Resources Administration, which provides a range of benefits for Qataris, including preferences in government hiring and various allowances, bonuses, leave and severance benefits.

Qatari men start to retire from the labour force at around age 40, much earlier than in most other countries (figure 4.20). Among the contributing factors are the generous public sector pension system—accessible at reduced levels as early as age 40—and the availability of highly rewarding alternative sources of income (from business and property rents, for example).

Improved labour market legislation

To achieve this outcome, the government will:

- Revise the 2009 Law on Human Resources Administration to reduce the discouraging effects on Qatari labour force participation and on the recruitment and retention of expatriates.
- Review the pension law with the aim of improving its efficiency and eliminating unintended negative impacts on the labour force.

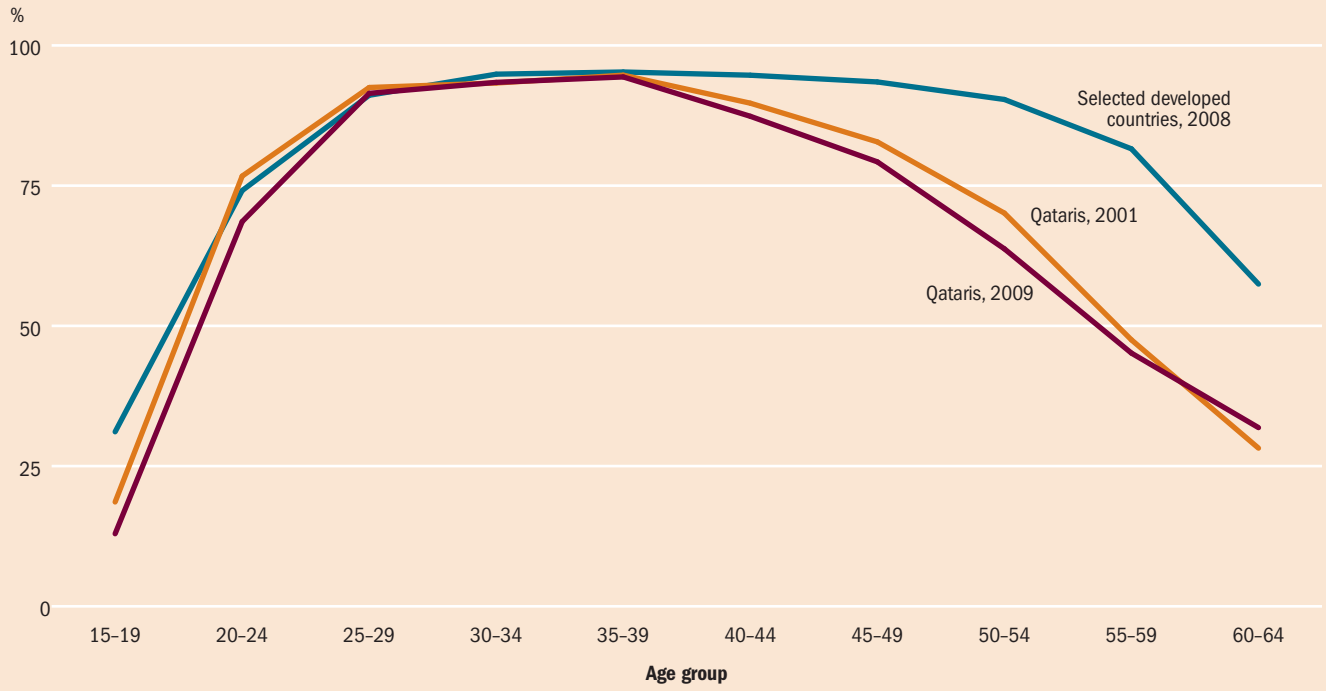
Target

- Increase Qatari labour force participation rates from 63% to 66% for men and from 36% to 42% for women.

Building the capacity of key labour market stakeholders

Governance of the labour market needs to be strengthened, and the Ministry of Labour would benefit from increased capacities, including some internal restructuring. Improved coordination mechanisms are needed between and within authorities dealing with labour-related sectors.

Figure 4.20 Qatari men start to retire from the labour force earlier than men in most other countries



Source: ILO, *Economically Active Population Estimates and Projections*, 5th edition (2009).

Labour market efficiency needs to rise, through improved capacity, coordination, legislation and regulations. Key aspects are motivating men to stay in the labour force longer by revising the 2009 Law on Human Resources Administration, to ensure that it achieves regulatory efficiencies; improving education outcomes; reforming the pension law; improving the working environment and increasing the capacity for strategic labour market planning.

Increased capacity of key labour market stakeholders

To achieve this outcome, the government will:

- Increase the capacity of the main government stakeholders, improving their structure and promoting more efficient organization through the interministerial body to coordinate labour market policies. Ensuring stronger coordination requires considering the partnership between government agencies and the private sector.

Target

- Strengthen the capacity of key market stakeholders and improve coordination between them.

Strengthening evidence-based policy-making

Labour market data, information and research are essential for evidence-based decision-making. However, Qatar lacks the comprehensive labour market data and research needed for effective labour policy-making. No single data source consolidates information on the labour market, so stakeholders have difficulty accessing relevant data. For example, the primary source of data on the Qatari labour force is held by the Ministry of Labour, that for the expatriate labour force by the Ministry of Labour and that on public sector employees by the Cabinet Office. These databases need to be linked to better inform labour market policy. Sharing labour market databases and information will require improved coordination among

the many stakeholders in Qatar's labour market policies (figure 4.21).

A national labour market information system could build on parallel efforts already taking place in Qatar. The most extensive source of labour market data is the Qatar Statistics Authority's annual Labour Force Survey. The survey is a rich data source but does not capture certain features of the labour market, such as the participation of Qataris in income-generating activities.

Labour market information system

To achieve this outcome, the government will:

- Develop a labour market information system on a user-friendly electronic platform to aid labour policy-makers. The system will complement other related projects, especially on the proposed Human Resources Master Plan. It will identify the variables needed by different parties, establish a methodology for sharing information, provide guidelines to ensure the privacy of individual data records, and facilitate operational policy research on factors affecting the labour market.

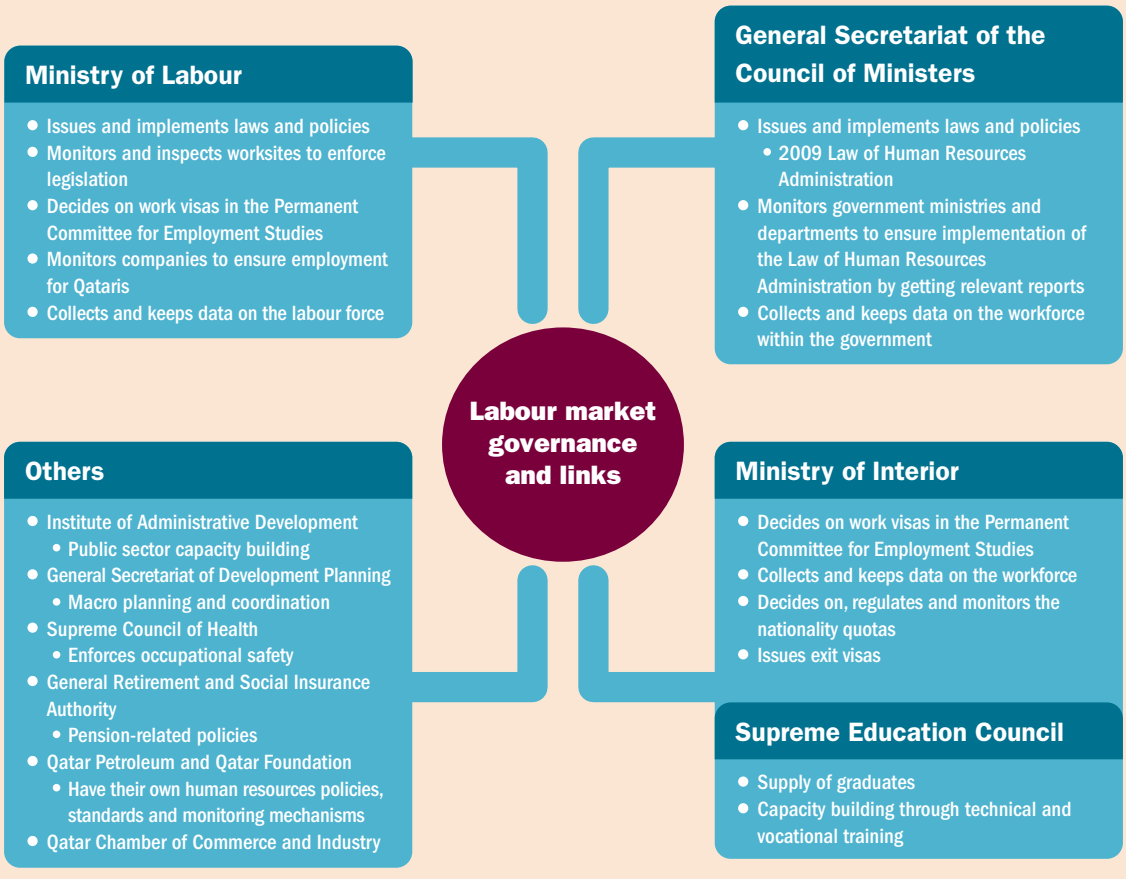
Target

- Develop and implement a comprehensive labour market data system for use by relevant stakeholders.

Enhancing employment and career counselling services

Modern employment services are critical for a flexible and efficient labour market. The only labour intermediation service in Qatar, provided by the

Figure 4.21 Key stakeholders in Qatar's labour market governance and links



Ministry of Labour, enables unemployed Qataris to register at the ministry's manpower department.

Information on training and employment opportunities for job seekers, especially for young adults, and career counselling and mentorship are not readily available. Qatari youth are not well informed about the high economic returns to post-secondary education, and few continue their education beyond the secondary level (table 4.3). An awareness campaign for Qatari youth and their parents on the benefits of higher education is needed.

The low levels of post-secondary education may be partly responsible for poor schooling choices. International studies also suggest that a failure to progress to higher levels of schooling may be due to the lack of the decision-making skills that more schooling helps improve.

Special needs groups, particularly women, the unemployed and people with disabilities, are not sufficiently supported by current labour market institutions and employment services.

Effective labour intermediation system for Qataris

To achieve this outcome, the government will:

- Design and implement a system of labour intermediation services. The Ministry of Labour has primary regulatory and policy-making responsibilities. Operational intermediation services could therefore be undertaken by a broader range of stakeholders. The government will select the model of ownership of these labour intermediation companies and the design of the services to be provided.
- Launch an awareness campaign on the high returns to tertiary education and the availability of career counselling services, including through the use of electronic media.

Target

- Establish labour intermediation services.

Implementation challenges

Achieving Qatar's ambitious development goals requires investing in the education and skills of the Qatari people in line with industry needs. It also requires introducing the necessary labour market reforms to achieve a world-class talent base. And because not all young Qataris have the capacity, or ambition, to pursue higher education and seek professional, managerial and leadership positions, Qatar will need to meet substantial demand for technical and vocational workers by providing appropriate pathways to technical education and vocational training.

The Ministry of Labour oversees labour issues for both the Qatari and the expatriate labour forces. However, many other public and private stakeholders have a big interest in labour market policy. Participation by relevant private sector institutions and civil society will be important for successfully implementing the sector strategy and achieving the goals of *QNV 2030*. Stakeholders will need to be kept informed of progress, for example

Table 4.3 Benchmark marginal rates of return for Qataris are high at the post-secondary level (%)

Education level	Male	Female
Primary (6 years)[a]	0.7	
Intermediate (9 years)	3.1	2.5
Secondary (12 years)	5.2	
Diploma (14 years)[b]	13.8	14.6
University (16 years)[b]	10.8	8.7

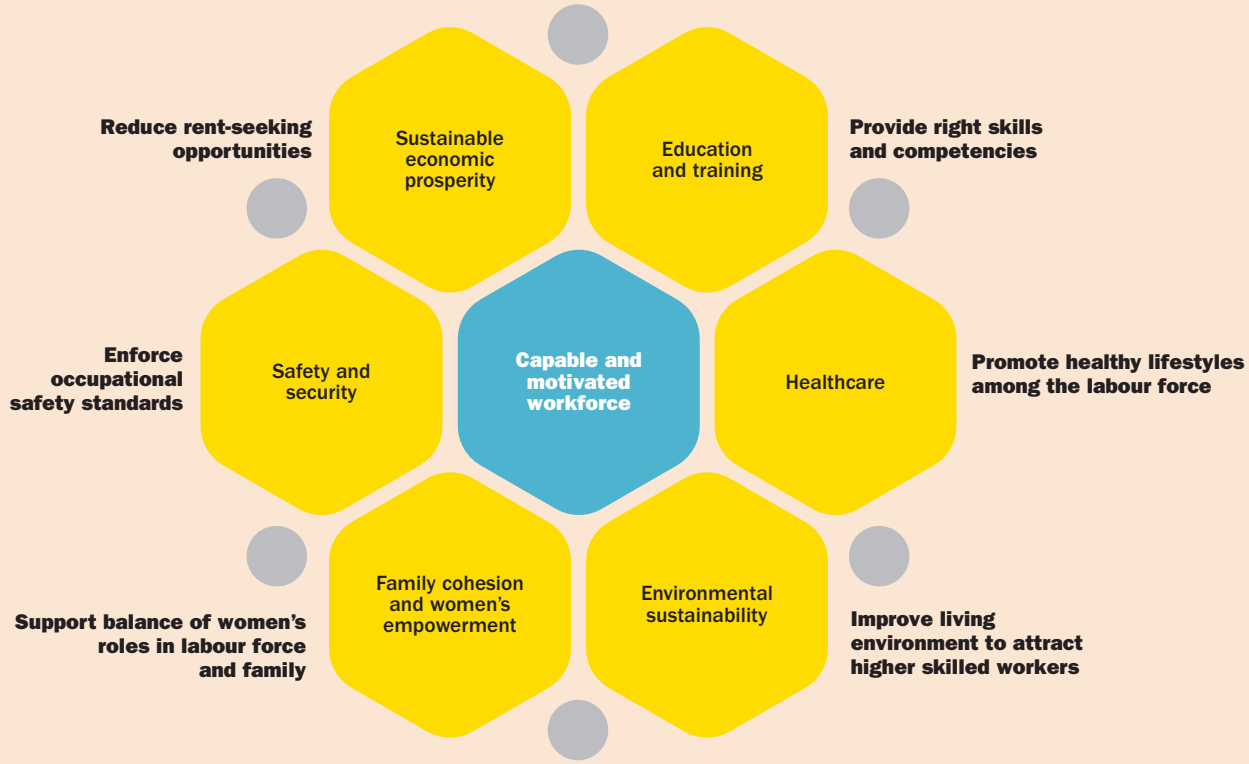
a. Accumulated years of schooling.

b. Compared with income at the secondary level.

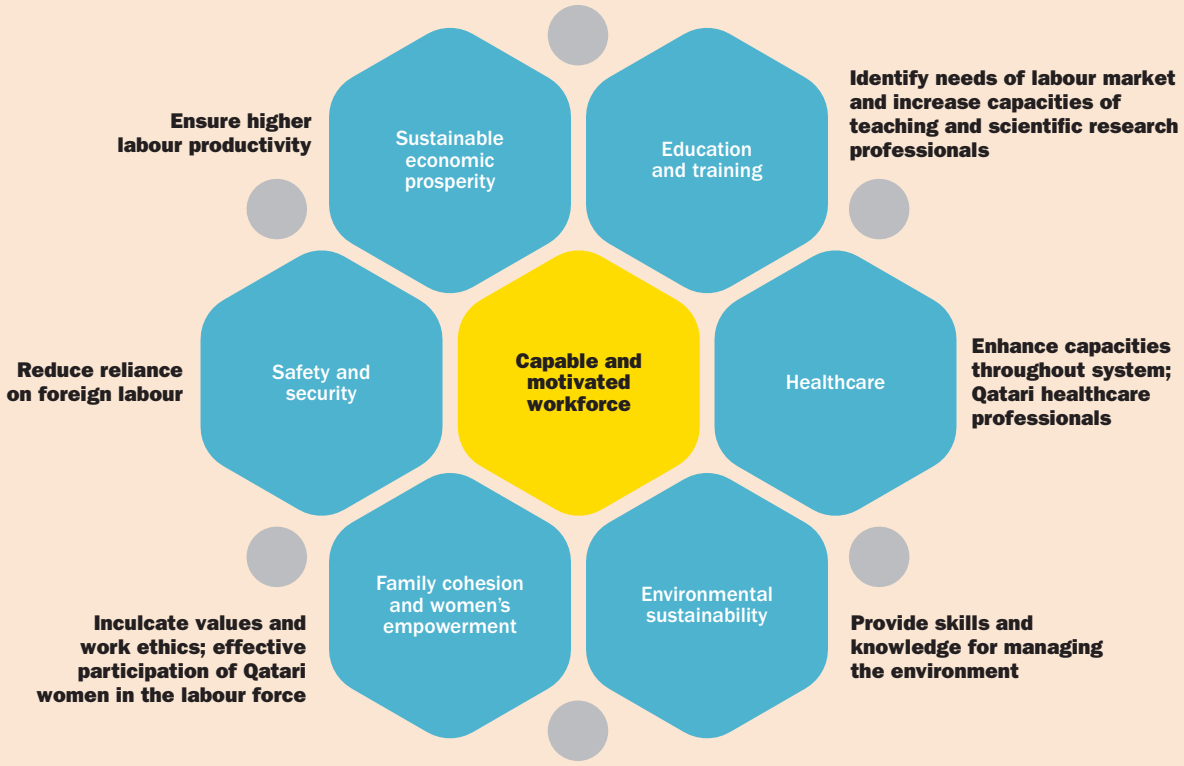
Note: Data may be interpreted to mean the percentage of extra income earned as a result of one more year of schooling at the given level.

Figure 4.22 A capable and motivated workforce is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for labour market sector



Labour market sector as an enabler for other sectors



through e-newsletters and a dedicated website. Engagement should include workshops, seminars and conferences.

To lead implementation of the sector strategy, the Ministry of Labour will need to build its technical capacity by recruiting labour market experts. Capacity enhancements can also be achieved through knowledge sharing and networking with experts at the national, regional and international levels. In addition, ministry staff will need training in project management and implementation to build capacity.

Fostering cross-sectoral links

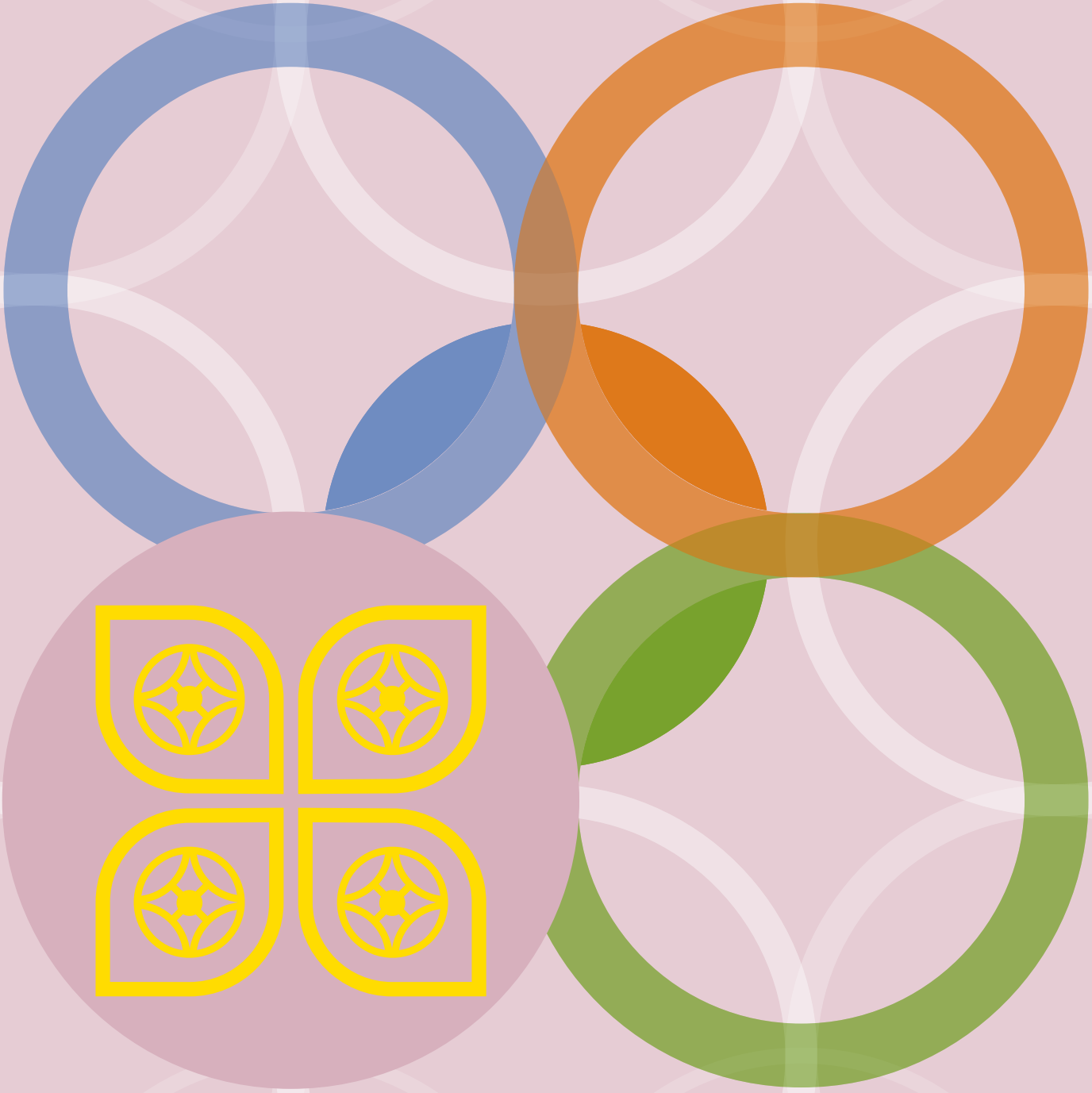
Successfully implementing the strategy is critical not only to developing human capital and increasing labour market efficiency, but also to achieving other *QNV 2030* goals (figure 4.22). Investing in quality education and training, including lifelong learning opportunities and changing mindsets, will help Qatar achieve its chosen development path.

In particular, education and labour force participation are highly correlated, with higher education levels associated with higher participation rates. To achieve Qatar's labour market goals, the education and training system must be relevant to the needs of the workplace. Increasing the realized returns to education and training could encourage Qataris to stay in school longer and improve their educational performance and attainment. Information on training and employment opportunities for job seekers, especially for young adults, and career counselling and mentorship need to be more readily available, both to increase education and training and to better inform Qatari youth about the economic returns to post-secondary education.

The links between education, training and employment policies require that policy-making and decision-making in the sectors also be linked. Appropriate institutional arrangements must be in place to provide policy guidance for the labour market and for education and training.

Chapter 5

An integrated approach to sound social development



5 An integrated approach to sound social development

Qatar National Vision 2030 (QNV 2030) builds on a society that promotes justice, benevolence and equality. It embodies the principles of Qatar's Permanent Constitution, which protects public and personal freedoms; promotes moral and religious values; safeguards traditions and cultural identity; and guarantees security, stability and equal opportunity. Social development requires broad participation of all citizens and the government, working together to fulfil the basic rights of individuals and the needs of the state.

Many countries link social policies to social services, such as education, healthcare, law enforcement and assistance to the needy. Qatar does the same—but the government extends the definition of social policy beyond the provision of basic amenities and services. As stated in *QNV 2030,* the country promotes social tolerance, benevolence, constructive dialogue and openness towards other cultures. Most important, it seeks to ensure justice and equality for all men, women and children of current and future generations. By broadening the traditional parameters of social policy, Qatar is able to enhance the government's role in fostering a caring and cohesive society.

Qatar's social policy, therefore, may be defined as the activities of government and civil organizations that together promote social and human development in a welfare society that is economically and environmentally sustainable. This definition underscores the interrelated links of the *QNV 2030* pillars while ensuring that all elements of the national vision are aligned and moving towards common goals, both across all pillars of society and within each pillar. Given Qatar's rapid social and economic transformation, promoting shared responsibilities for common goals through integrated social development is critical to maintaining stability and cohesion.

Qatar's social development pillar encompasses a wide range of stakeholders in an expansive manner—from childhood to old age, from early education to retirement, from private family life to international relations. It encompasses the government's responsibility to its citizens and citizens' responsibility to their families and communities. A progressive and modern social policy, therefore, must help individuals deal with the requirements of the time in which they live. The modern era in Qatar is a period of incredible growth and opportunity but also of unprecedented social change. The government will need effective measures to promote tolerance and maintain compassionate values as the country's population grows and diversifies, as a new generation ages in a more open society and as private and international interests invest in Qatar's future.

An integrated social development policy must always take into account the well-being of Qatar and its citizens. By building a safe, secure and stable society through strong and effective government and family institutions, Qatar will achieve the *QNV 2030* outcomes of effective social care and protection, sound social structure and international cooperation. The National Development Strategy 2011–2016 will lay the foundation for these goals with a social development strategy that

seeks to enhance individual well-being without compromising Qatar's cultural identity. This strategy will integrate the following elements:

- Establishing strong cohesive families that care for their members and maintain moral and religious values and humanitarian ideals.
- Establishing an effective social protection system for all Qataris that ensures their civil rights, values their contribution in society and ensures an adequate income to maintain a healthy and dignified life.
- Establishing a secure and stable society operating on the principles of justice, equality and the rule of law.
- Increasing active lifestyle practices among the population to improve health outcomes and to use sports participation to forge friendships and improve relations between countries worldwide.
- Establishing Qatar as a hub of Arab culture through a distinctive national identity, strong community cohesion and a vibrant and creative cultural sector.

This cohesive approach to a social development strategy will cut across all elements of society while enabling related economic, environmental and human development goals. It will preserve and enhance the quality of service expected by individuals and businesses, be dictated by proper adherence to cultural values and offer sustainable solutions to targeted goals for 2016 and beyond.

Qatar's social development policy requires coordinated and comprehensive integration of five interrelated social sectors. The aim is to bring different types of programmes, target groups and modes of provision under a single social development policy framework. An integrated approach to wide-ranging objectives will maximize outcomes and ensure better coordination between different stakeholders working towards a common goal.

Given the nature of the social development projects to be implemented under the National Development Strategy 2011–2016, close cooperation between all segments of government and society is imperative. Successfully involving the numerous ministries, government agencies and civil society organizations will be a key success factor.

By creating an enabling environment for an inclusive society, including digital inclusiveness, that offers fair employment opportunities to everyone, such as the disadvantaged and vulnerable, the government is also enriching the labour force. By providing debt-burdened families with the tools to better manage their finances, the government is also strengthening the economy. By developing programmes to promote participation in sports and athletic activity, the government is contributing to a stronger, healthier population and, eventually, lower healthcare costs. By fostering a creative learning environment through enhanced culture and arts programmes, the government is building a stronger education system. All these activities will make for a comprehensive social development policy, but they will also enable effective outcomes for Qatar's human development, economic and environment goals.

The fundamental elements of Qatar's national vision for social development revolve around a sound social structure that guarantees social care and protection for all members of society. Only through the kind of cross-sectoral framework identified above can those goals be achieved, since all segments of society must work together for the betterment of everyone's well-being. By ensuring the individual well-being of all Qataris, whether through increased career opportunities for women or through stronger occupational safety standards, the government can expand the traditional role of social policy to incorporate equity and justice as identifiable outcomes across multiple sectors.

In forming a comprehensive action plan for immediate social development, the government is keenly aware of the consideration that must be given to long-term concerns alongside more immediate goals. Many of the targets presented for the National Development Strategy 2011–2016 will be

implemented with the dual purpose of addressing current challenges facing Qatar while laying the groundwork for sustained excellence. Resources, programmes and commitments made now must not infringe on the well-being of future generations. Rather, current initiatives will aim to create a better society through addition not subtraction, by building social equity and increasing social capital without reducing the country's resources or diminishing its historical heritage.

This mission of sustaining a fair and just use of resources over multiple generations supports all social development goals for the national vision and beyond as well as the more immediate goals for 2011–2016.

Taken together, these objectives form an integrated blueprint to realizing the *QNV 2030* ideal for social development—a safe, secure and caring society built on a sound social structure of effective institutions and cohesive families. Taken individually, these goals offer separate but related frameworks for identifying challenges, establishing baselines and proposing solutions to enhance the well-being of all Qataris and to provide clear sectoral targets for the National Development Strategy 2011–2016.

Family cohesion: the core of Qatari society

Qatar will preserve "a strong and coherent family that enjoys support, care and social protection. Women will assume a significant role in all spheres of life, especially through participating in economic and political decision making."—Qatar National Vision 2030

The family is the basis of Qatari society. It is the foundation on which rest all aspects of Qatar's social architecture. The Permanent Constitution protects the family, supports its structure, strengthens its ties and protects maternity, childhood and old age. Similarly, *QNV 2030* aims to preserve strong and cohesive families as the fundamental element of the country's long-term social development strategy. The Qatari family is the first and most influential educator and inculcator of values. The well-being of families is therefore crucial to a sound social structure, and it is necessary to build an effective social care and protection system. A dedicated commitment to marriage, a keen understanding of personal responsibility, an appreciation of traditional values, a strong bond between parent and child, a sense of mutual respect among all men, women and children—these are vital characteristics of healthy, cohesive families.

Qatar's strong Arab and Muslim identity pervades all aspects of family life and continues to inform the family structure through extended household makeup, traditional kinship ties, ethnic affiliations and a tribal authority that determines the behaviour of sons and daughters. But changes brought on by external pressures and internal evolutions are rapidly altering the family dynamic. Some of these changes are undesirable, leading to rising divorce rates and increased domestic violence. But many changes point to a society that is expanding its cultural imprint while staying true to its Arab identity.

Women are central to the evolving Qatari family. Even as they maintain an adherence to valuable traditions, women are adapting to the impacts of modernization. Through their nurturing of language, codes of ethics, behavioural patterns, value systems and religious beliefs, women play an indispensable role in upholding traditional familial and cultural values. They also exemplify the new opportunities available to all Qataris as a result of the country's rapid economic growth and social transition. As Qatar implements a sustainable and integrated social development policy over the next six years, it is critical to ensure that the policy moves outward, not inward, and that it is rooted in the core of Qatari society—families.

The family cohesion and women's empowerment sector of the National Development Strategy 2011–2016 social development pillar thus supports a strong family structure that cares for its members and maintains moral and religious values and humanitarian ideals. At the same time, the government will show an increased dedication to enhance women's capacities and empower them to participate more fully in the political and economic spheres. This obligation to Qatari families, women and the national vision will be carried out in the National Development Strategy 2011–2016 through 8 overarching outcomes and 12 priority family cohesion projects in which the government will:

- Strengthen the Qatari family as a pillar of society.
- Strengthen parental responsibility and reduce dependence on domestic helpers.
- Reduce family violence and establish a protection and support system for victims.
- Provide support systems for families with special circumstances, such as the families of people with disabilities and juvenile delinquents.
- Reduce economic and social vulnerability and improve Qatari families' financial management skills.
- Increase child well-being, child welfare and child protection.
- Improve support for working families, particularly for women.
- Increase the number of women in leadership and political decision-making positions.
- Reduce stereotyping of women's roles and responsibilities.

All family-related projects targeted for the development strategy are closely interrelated. It is also

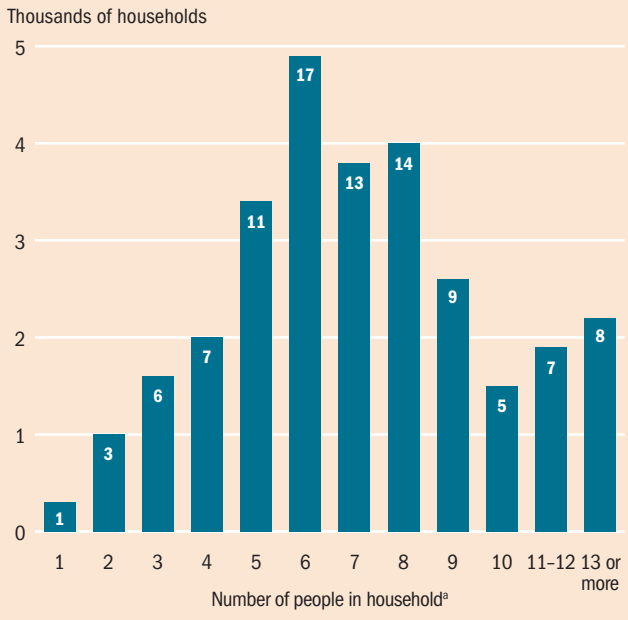
supported by the National Family Strategy 2008–2013. They are intended to strengthen Qatar's long-term social care and protection outlook and to embody the common social development theme of increased well-being—the stronger the family structure's well-being, the stronger Qatar's social core becomes for future generations.

Reinforcing family cohesion

In the past decade or so Qatar has experienced rapid development progress. Yet most Qatari households remain relatively large (figure 5.1). More than 80% of households comprise 5 or more people, and 20% comprise 10 or more. Two-person households are rare, and one-person households are even rarer. But some of the more traditional aspects of family life are changing.

Two of the most prominent trends are the sharply rising proportion of Qatari women who never marry and steadily increasing divorce rates, which are particularly high among couples married for a short time. A long-term trend that levelled and slightly reversed after 2005 is the rising age at first marriage among Qatari men and women. On average, men marry at age 27, women at age 24.

Figure 5.1 Qatari households remain relatively large



Note: Values in bars are percent of all households.

a. Excludes domestic workers.

Marriage is the foundation leading to the formation of Qatari families. In Qatari society premarital relationships are prohibited, and most marriages are arranged by parents according to Islamic Sharia, culture and traditions. A majority of men and 60% of women have married by ages 25–29; only 1% of men and 6% of women marry before age 20. Based on the information collected by various family support institutions, three leading reasons for these delays include the high cost of wedding ceremonies, higher selectivity in suitable marriage partners and, for men, easier access to illicit sexual relationships.

With the later ages at which Qatari women are marrying for the first time, they are having their first child at a later age than in the past. Qatari women are also having fewer children than they did a generation ago (figure 5.2).

The number of divorces per 1,000 married Qataris increased from 17.4 in 1995 to 19.2 in 2009 (figure 5.3), especially among younger couples. In 2009, 61% of divorces took place within the first five years of marriage, and 29% of divorces happened before the consummation of the marriage. Knowledge pertaining to the impact of divorce on the Qatari family and on children's well-being is limited, but empirical evidence shows that divorced household heads are more than twice as likely as married household heads to live on a relatively low income.

Ensuring the continuity of cohesive families and large households is crucial to the national vision, since families are the core of Qatari society and have a moral and religious obligation to care for their members. The government will strengthen family cohesion by developing a programme to focus on solidifying the role of marriage and family ties within Qatari society through marriage counselling and by increasing support to divorcées. The government will expand the social safety net for those in need of extra help, even as efforts are made to reduce the number of Qatari couples

Figure 5.2 Qatari women are having fewer children than they did a generation ago

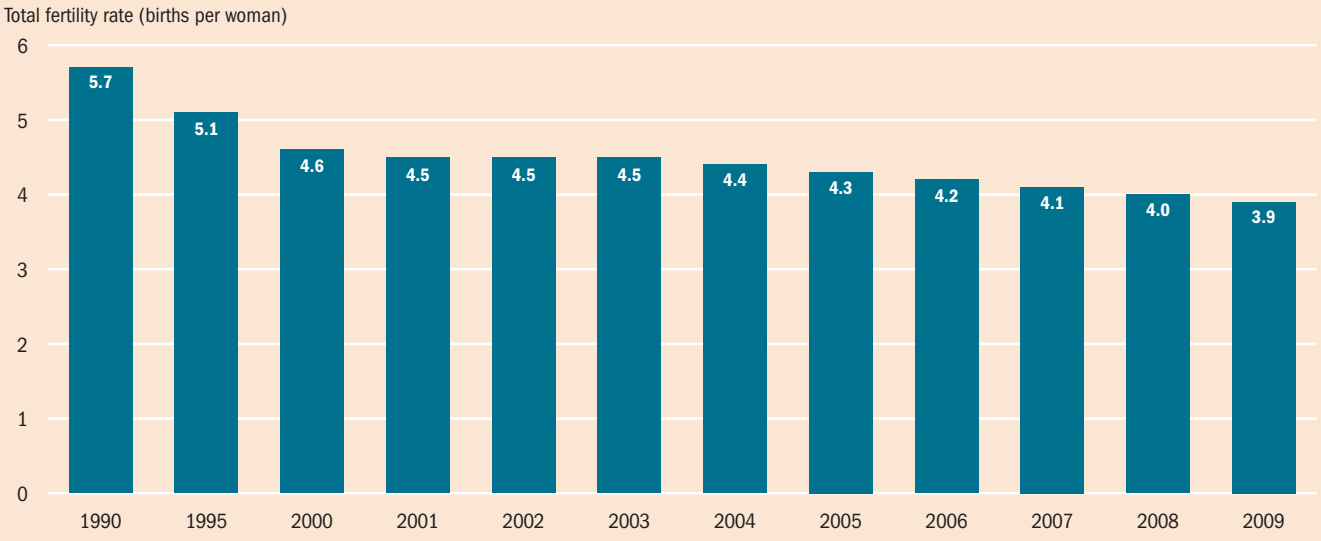
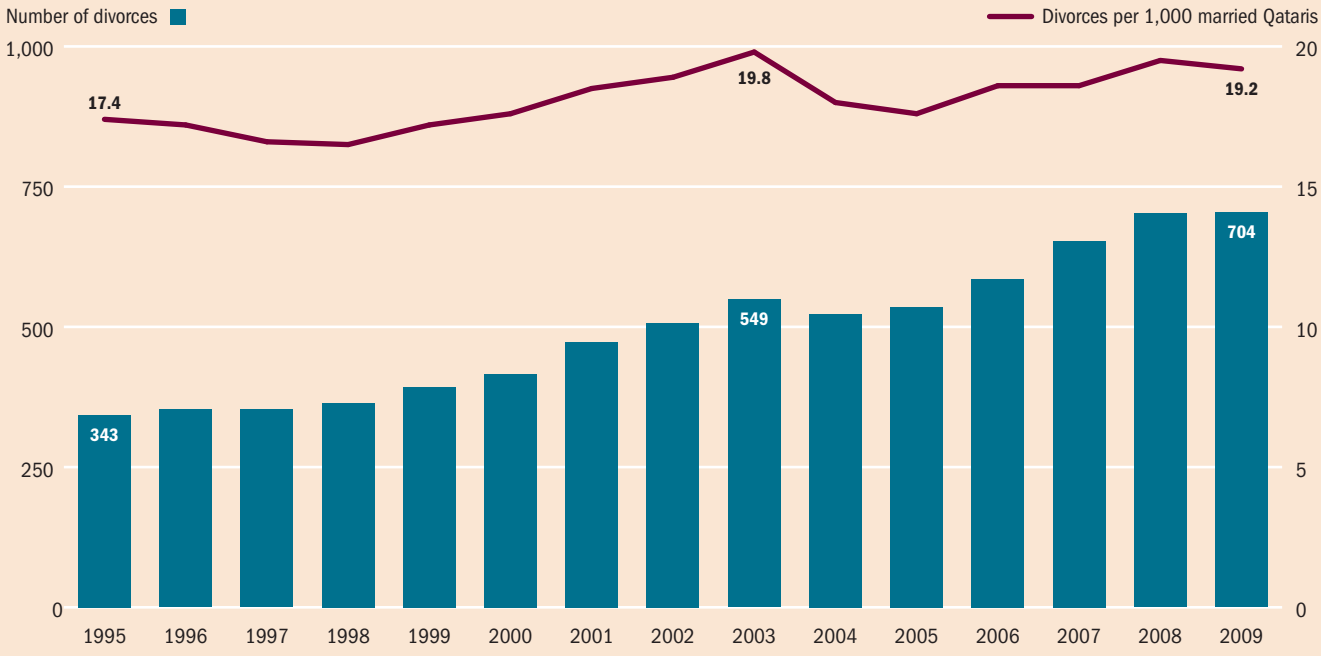


Figure 5.3 The divorce rate per 1,000 married Qataris rose from 17.4 in 1995 to 19.2 in 2009



Note: Divorce numbers are three-year moving averages. The denominators for the rates for years other than 2001, 2004 and 2006–2008 are estimates.

seeking divorce. These efforts are also being supported by Qatar's 2009 population policy.

A programme to strengthen marriage and family ties

All Qatari couples will be required to attend and complete a series of pre-marriage counselling and education programmes on the obligations of marriage and importance of family formation. The programmes will act as a precondition for the receipt of the marriage fund that the government provides Qatari couples. The premarital courses will also support efforts to increase couples' awareness of potential problems that face

married people. In Malaysia a similar programme requires all Muslim couples to pass a set of courses on marriage prior to receiving a certificate of completion, which is used as a licence to authorize the marriage.

Since the development of Qatari families is also governed by legislation, in particular Law 22 of 2006, laws relating to the family will be reviewed and revised to reflect societal changes in Qatar and international commitments made under the United Nations Convention for the Elimination of Discrimination Against Women. Such measures have been used by other countries in the region to improve family cohesion. In addition, a specialist media unit will be developed within the Qatar Media Corporation to support key messages on the importance of the family, and a new subject on marriage and family ties will be included in the academic curriculum.

Targets

- Implement a programme to strengthen family cohesion, with at least four projects completed.
- Reduce the proportion of Qatari women who are unmarried by ages 30–34 by 15%.

A system of marriage counselling and support for divorcées

The services of the Family Counselling Centre will be expanded throughout Qatar to provide strategic intervention in an attempt to reduce divorce rates, while the government will aid the establishment of private counselling services. Efforts will also be made to expand the number of psychological and counselling specialists in the area. More access to highly trained specialists will help couples proactively address difficult issues before deciding to separate. These issues include social inequality of spouses, behavioural deviations, relationships away from marriage, negligence of marital and family responsibilities, bullying, mistreatment, domestic violence and financial pressures.

The government will take steps to strengthen the social safety net for those facing divorce, especially women. Divorced women are currently eligible for monthly benefits (QR 2,250) from the Ministry of Social Affairs, but to further reduce the effects of divorce, the government will create an alimony fund as an additional safety net for women who lack financial support from their ex-husbands.

Target

- Reduce the number of Qatari couples seeking divorce before consummation by 20% and after consummation by 40%.

Strengthening parental roles

Beyond changing patterns of family formation and dissolution, there are concerns about the expanded role of domestic helpers in Qatari households, particularly those engaged in child care. Most have limited education and difficulties communicating in Arabic. Heavy dependence on domestic helpers is leading to weakened family ties, affecting traditional family values and child well-being.

This reality raises three key impact concerns: weakened bonds between parent and child, adverse impact on child safety and development, and negative effects on Qatari heritage and culture. The government will strengthen parental roles through a social programme intended to change attitudes and strengthen parent-child relationships, through enhanced early childhood education on the importance of meeting family responsibilities and through stronger regulations governing the recruitment and management of domestic helpers.

A programme to enhance parent-child relationships

This programme will raise awareness of the potential dangers to family cohesion from increased reliance on domestic helpers. The key messages will focus on the adverse effects of heavy dependence on domestic helpers and the need to share responsibility among family members, taking

into account that each Qatari nuclear family has four levels of ties that bind them to an extended family. In addition, home science courses will be included in the school curriculum. These courses will extend beyond the instruction of chores such as cooking and sewing; they will also teach children how to share family responsibilities and how to properly look after their family and homes.

Target

- Reduce by half the average number of domestic helpers per household.

A system to regulate domestic helpers

The government will devise a set of regulations, including standards and conditions, to better manage the recruitment and employment of domestic helpers. This way forward will be supported by new legislation covering the legal rights of domestic workers. Inclusion of domestic workers into national labour laws is already being explored in Kuwait, Saudi Arabia and the United Arab Emirates. Stronger regulations will improve the relationship between the family and domestic helpers, particularly in relation to clearer demarcation of responsibilities and duties. In addition, the government will establish a support centre for domestic workers, including an office and helpline to report abuse and exploitation. An induction programme intended to educate domestic workers on Qatari culture will provide additional support to domestic helpers.

Target

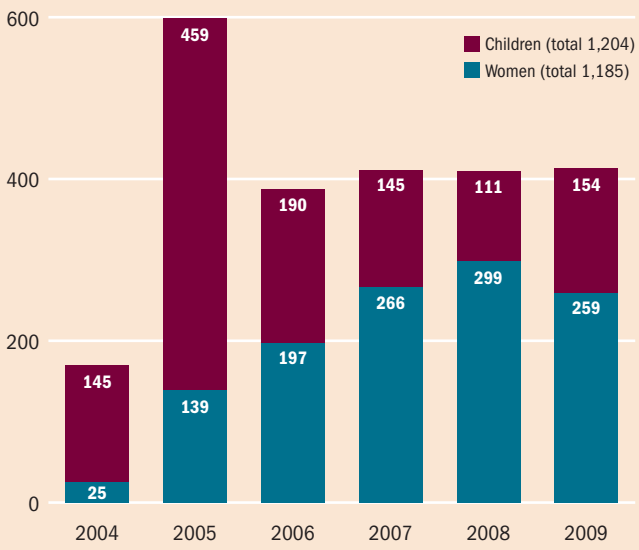
- Put in place regulatory guidelines on recruitment and management of domestic helpers.

Reducing domestic violence

A primary responsibility of any family member is to contribute to a caring, supportive and safe environment for everyone. But since 2004 Qatar has seen a significant jump in the number of reported domestic violence incidents against women and children (figure 5.4). Such violence has devastating consequences not only for the victims but also for society as a whole. Gender-based violence, which includes physical, emotional and sexual abuse, has economic and social costs that directly

Figure 5.4 Domestic violence cases are prevalent in Qatar

Cases of children and women referred to the Qatar Foundation for Child and Woman Protection since 2004 . . .



. . . supported by other studies on Qatar

In 2007 a SCFA study surveyed 2,778 citizen and noncitizen female students:

- 63% reported they had been victims of physical abuse.
- 52 individuals reported cases of "strong violence" (such as rape).
- 120 individuals reported they had been victims of sexual harassment.

A 2008 study surveyed more than 1,000 married Qatari women:

- Consistent with earlier studies—an estimated 28% of married women reported having experienced domestic violence.
- Domestic violence was most frequently carried out by husbands (the main source), brothers or fathers.

undermine Qatar's goal of providing social care and protection for all its citizens. Domestic violence is currently not classified as an offence under criminal law, although there is a range of legislation that does not condone violence against women and children.

Qatar faces two primary challenges in reducing domestic violence: the lack of a systematic data collection system and incomplete investigations of suspected cases of abuse or neglect. Formal reporting of violence in the family is culturally unacceptable, and victims tend not to report because of the fear of shame in a relatively small society. Additionally, a lack of awareness of rights often prevents family members from disclosing violence or seeking help. There is also fear of repercussions in terms of the social, legal and political consequences for victims and their families.

The government will reduce domestic violence by establishing a comprehensive protection system that ensures privacy, protection and support for victims as well as anyone reporting violent incidents, establish help centres, streamline data collection methods and, most important, criminalize domestic violence. In addition, an early detection mechanism for child abuse and neglect will be implemented in schools.

A comprehensive domestic violence protection system

With no process for tackling domestic violence and child protection issues currently in operation, a full-scale programme will be developed, starting with the review and adoption of legislation to criminalize domestic violence and the creation of follow-up policies (in coordination with law enforcement) to protect victims. Current methods of data collection will be reviewed to consolidate procedures and establish a formal reporting and monitoring system that guarantees confidentiality. And formalized legal protection for those who report cases of violence to authorities will be established.

In addition to legal initiatives, efforts will be made to establish a broader network of community and social support services, including multiple one-stop centres to provide protection assistance, a community-based awareness programme to call more attention to prevention methods, a thorough review of current shelters and facilities to ensure they meet international best practices and standards, and the creation of family-friendly police units and an emergency hotline to improve the reporting culture.

Target

- Put in place a comprehensive domestic violence protection system.

An early detection system for child abuse and neglect

A formal child protection programme is outlined under the draft child law, which will ensure that Qatar meets its obligations under the United Nations Convention for the Rights of the Child. Additional efforts by Qatar's Child Abuse Committee, which was initiated by the medical community and is currently operational, will be encouraged, though an immediate agenda is already in place. Those plans include the establishment of a data registry centre for child abuse and neglect, child advocacy programmes, a public awareness campaign and improving the lines of communication between hospitals and relevant authorities.

These activities will intersect with the holistic approach to child well-being that is an additional component to the family cohesion sector strategy for the National Development Strategy 2011–2016. This approach will be centred on developing a mechanism to detect early child abuse and neglect by increasing the number of social workers in schools, youth awareness programmes and school hotlines to ease and encourage reporting.

Target

- Install and operate an early detection mechanism for child abuse and neglect.

Supporting families with special circumstances

Qatar has a generous social protection system provided by multiple stakeholders, including the government, civil society organizations and the private sector. However, some families face special circumstances that require additional social care. These circumstances include caring for and protecting a family member who faces challenges related to age, health or social conditions, such as being elderly, having a disability, having been in prison, being a drug addict or being a juvenile offender. The government will support families with special needs by increasing the range of assistance facilities available to Qataris within their communities, improving the focus of data collection to establish a stronger evidence base, and reviewing and updating current legislation to provide stronger legal protections.

Assistance to families that face special circumstances

To address the additional problems of families that face special circumstances, the range of support facilities available to Qataris within the community will be increased, the focus of data collection will be improved and relevant legislation will be reviewed and updated if necessary. Families will be able to receive informal support and assistance from community-based centres without fear of stigmatization. This positive model will also build awareness of the difficulties faced by some families and how they can be helped or how they can support and help each other. The centres will take the lead in establishing local civil society associations to provide additional support.

A review and revision of laws relating to the status of children belonging to Qatari women married to non-Qatari men will be undertaken to ensure that all children receive the necessary essential services to guarantee their well-being. And existing legislation relating to people with disabilities will be comprehensively enforced, including their inclusion in the workforce, which is a key part of the social protection sector strategy of the National Development Strategy 2011–2016 social development pillar. Protection and support for people in need and their families are vital measures of how inclusive and caring a society truly is.

Target

- Increase the number of facilities providing support for families facing special circumstances from zero to three.

Reducing economic and social vulnerability and improving financial management

Qatar does not have a personal income tax or value added sales tax, and a number of noncontributory government transfer programmes exist, with beneficiaries ranging from disadvantaged groups to newlyweds through the marriage fund. But three-quarters of Qatari families are in debt, with most burdened by large loans exceeding QR 250,000. This statistic is linked to weak economic and social empowerment of vulnerable families and a prevailing culture of extravagance and conspicuous consumption (figure 5.5). There is a weak financial culture among families overall, and in some cases this results in taking out loans without fully understanding the costs of repayment. Although Qatar provides free healthcare and education, data suggest an increasing number of families are incurring debt to cover costs of private sector service providers. Vulnerable families, especially those in the low-income category, will be more susceptible in these conditions. Families likely to be affected are those headed by women, especially divorced and widowed women, families with retired and unemployed heads and families headed by employed people with lower education levels.

To reduce more severe, longer term financial security threats, especially among the vulnerable, the government will support measures to improve the financial management practices of Qatari families through a programme to increase education, awareness and financial planning skills. Changing attitudes towards debt and promoting sound spending and investment practices will be critical

Figure 5.5 More financial responsibility and less indebtedness are needed

Increasing pressure from inflation and spending . . .

Income and inflation	2001	2007
Average income (QR; nominal)	19,912	41,483
Average income (QR; real)	19,912	27,000
Consumer price index (2000 = 100)	100	151

Basic goods and services	2001	2007
Residence, water, electricity	17.6%	29.3%
Transportation	16.5%	13.8%
Food and beverages	17.5%	11.2%

Income and expenditure	2001	2007
Average income (QR)	19,912	41,483
Average expenditure (QR)	22,366	40,757

. . . aggravated by high levels of indebtedness among Qatari households

A 2007 study covering a sample of 1,368 Qatari households showed an increased focus on indebtedness due to pursuit of lifestyles potentially beyond their means:

- Loans for speculation in the stock market reached QR 297,000 per household.
- Loans for entertainment, travelling and touring reached QR 203,000 per household.
- The average value of a car loan was approximately QR 111,000 per household.

Loans are also taken to pay for health and education services, indicating a shift towards private sector services due to changing socioeconomic conditions:

- Loans for healthcare services reached QR 256,000 per household even though healthcare is free in Qatar.
- Healthcare expenses probably cover payments for treatment abroad.
- Loans for educational pursuits reached QR 167,000 per household, most likely to cover students who did not benefit from the student exchange system or government-provided subsidies or scholarships.

to the financial well-being of current and future generations.

Capacity, awareness and support for family finances

A comprehensive, supportive approach to curb the desire to live above one's means will begin with awareness and counselling programmes as a pre-marriage requirement and will include an easily accessible financial advisory service that offers legal advice on loan rates and payments. A thorough campaign against indebtedness will require legislative action, including setting limits on maximum allowable loans based on an individual's income. This will provide some level of protection for individuals and subsequently improve the financial status of families by improving financial management, reducing extravagant and non-necessary expenses now being financed through loans. Since data support the desire for Qataris to seek private sector healthcare and education —two sources of potentially large financial expenditure—the government will enact a comprehensive health insurance system for families and provide an education allowance or vouchers for private education. These measures provide cross-sectoral alignment with the National Development Strategy 2011–2016 human development strategies as well.

Targets

- Reduce the number of Qatari families burdened by large loans (QR 250,000 or more).
- Halve the number of Qatari families in debt.

Adopting a holistic approach to child well-being

A solid social structure depends on sustainable health and education measures to strengthen its future generations—a key focus of the human development strategies for the National Development Strategy 2011–2016. But the prominence of health and education in *QNV 2030* requires careful, cross-sectoral considerations of Qatar's

investments in today's children, including the crucial elements of children's social development.

Though certain family-specific issues have already been identified, the government will adopt a holistic approach to child well-being as well. Although international child measures indicate Qatar is in a fairly good position in relation to other countries in the region, Qatari children face threats ranging from health to education to risk-taking behaviours (figure 5.6).

Qatar has already taken major steps to strengthen its commitment to children's welfare, safety and health. The comprehensive draft child law will ensure that Qatar complies with the most important piece of internationally accepted legislation in relation to children's rights. But the National Development Strategy 2011–2016 provides the government the opportunity to do more to enhance the well-being of children, as recent data point to significant health problems in the next generation, such as vitamin deficiencies and obesity. Other health risks come from kinship marriages, which have led to increased rates of congenital birth defects, and smoking and drug abuse. Smoking rates among children ages 13–15, for instance, are 13% for girls and 25% for boys.

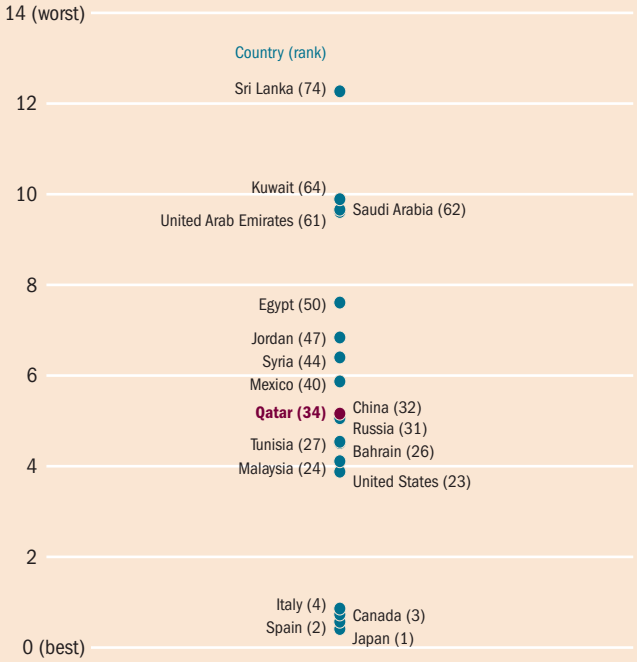
A holistic approach to child well-being

Reversing negative trends and improving the quality of life of children will require a series of activities that work in unison across all sectors of government to provide a just, healthy quality of life for Qatar's current and future generations. This work will also require changing behavioural attitudes and ensuring that personal pride and virtue are instilled in Qatari youth. The government will promote active citizenship and provide opportunities to develop necessary life skills in order to develop Qatar's future leaders. A youth

Figure 5.6 Qatar will adopt a policy-making approach in the best interest of children's well-being

Qatar's child development index score is in the top bracket . . .

Child development index score, 2000–2006



. . . but well-being of children remains a rising concern

Significant health and nutritional issues among Qatari children were identified in recent Aspetar Hospital study:

- 90% of girls showed vitamin D deficiency.
- 46% of girls were osteopenic, and 27% had osteoporosis.
- Average body mass index among Qatari boys ages 10–13 was 22 kilogrammes per square metre (in 90th percentile), indicating severe obesity.
- 50% of Qatari boys are in the 22–36 kilogrammes per square metre range.

The best interests of children are affected by changes in family cohesion:

- The impact of divorce on Qatari children is not fully known, but children in divorced households are more likely to be low-income.
- Reliance on domestic helpers who are not experienced child caregivers has potential detrimental effects on children's emotional and cognitive development.
- Violence has multiple adverse effects on children.

Source: Save the Children UK, *The Child Development Index: Holding Governments to Account for Children's Well-Being* (2008).

"parliament" will be formed to teach the concepts of democracy and strengthen children's sense of civic and personal responsibility, justice and leadership. And training programmes will be created to strengthen intergenerational relationships.

In all legal and policy decisions the state will adopt "best interests of the child" criteria, especially in custody and child protection cases. A children's court, separate from the regular adult court process, will be established, while the age of criminal responsibility for children will be increased from age 7 to age 12 or older. Once enacted, the draft child law will provide a comprehensive framework within which all activities relating to children will be implemented and measured. These activities will cut across multiple National Development Strategy 2011–2016 sectors.

Targets

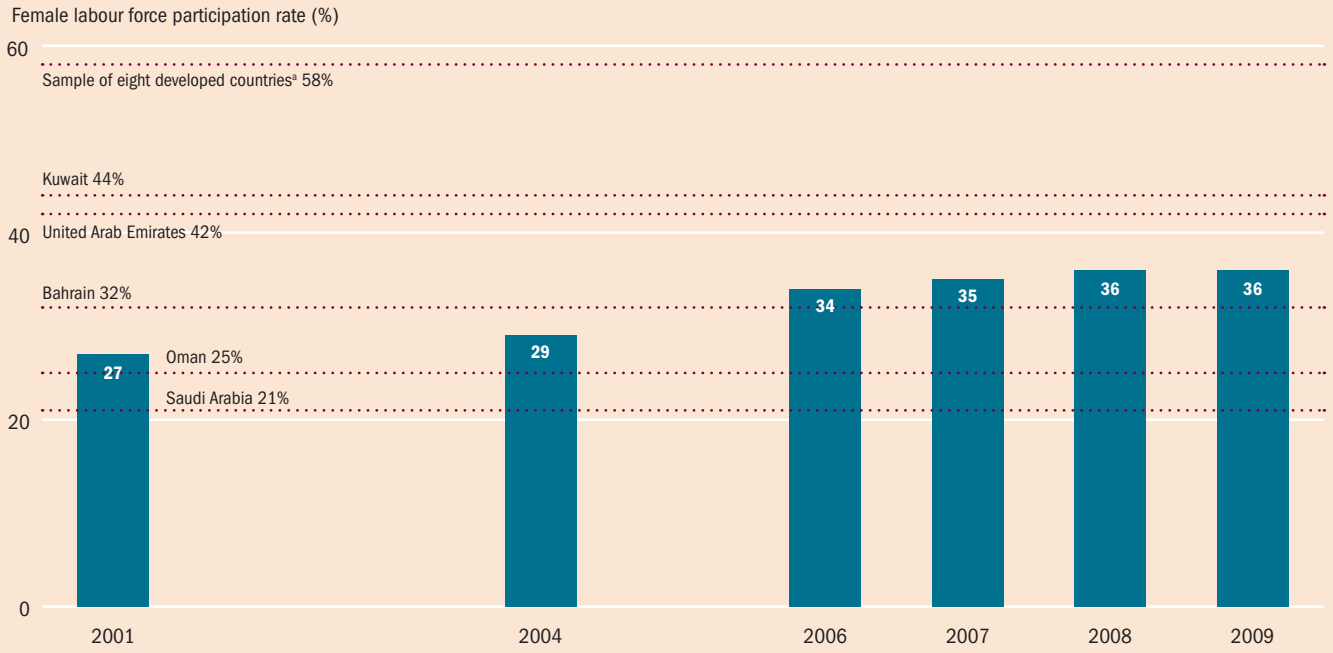
- Reduce the number of under-18 drug addicts to 1%.
- Reduce the number of under-18 smokers to 10%.
- Halve the incidents of under-18 reckless driving.

Improving work-life balance for women

While implementing methods to provide stronger social care for children and families and to strengthen marriages, the government must be aware of a delicate balancing act—to preserve and enhance the traditional Qatari family core while empowering women to participate in all spheres of society, especially in economic and political decision-making. The national vision calls for enhanced capacities and more prominent societal roles for women, and the National Development Strategy 2011–2016 will seek to improve on the gains already made by women in recent years.

More Qatari women are joining the labour force (figure 5.7), a trend that is consistent with women's rising educational attainment. As learning opportunities continue to increase, women's participation in the workforce will also increase. By 2016 the government expects Qatar's rising female labour force participation rate to stand at 42%. To be better prepared for this cultural shift, the government has taken numerous measures, especially through

Figure 5.7 The labour force participation rate of Qatari women rose sharply from 2001 to 2009



a. France, Germany, Japan, Norway, Singapore, Sweden, the United Kingdom and the United States. Data are weighted by the working population ages 15 and older.

Source: ILO, *Economically Active Population Estimates and Projections*, 5th edition (2009).

the 2009 Law on Human Resources Administration, to improve women's working conditions, including provisions for a 60-day maternity leave, allotted time (two hours a day for a year) to breastfeed a baby and extended care leave for women with disabled children under age 6.

However, the extent to which women are able to participate and remain in the labour market is intrinsically linked to the support available to help women balance family and professional responsibilities. The government will improve support for working families, particularly for women, by expanding child care facilities and family-friendly employment practices and by encouraging gender-sensitive working environments.

Measures to help women balance work-life responsibilities

The availability of high-quality, affordable and accessible child care is the most significant factor in improving personal and professional balance. Even more important, a well planned approach can contribute positively to the developmental outcomes of children. Kindergartens and workplace nurseries are operational, but they will be enhanced, while the number of private and public day nurseries and kindergartens (currently 137 private and 12 independent) will be increased. Transferring responsibility of day nurseries from the Supreme Council of Education to the Ministry of Social Affairs will allow a more comprehensive plan to be created and implemented to improve workplace child care. New legislation will set minimum standards for nurseries and kindergartens and ensure proper staff qualifications.

The government also will build on best practices from other countries to adopt more family-friendly work measures, such as flex time, part time and special leave. In addition, the work-life balance for women will be improved as other National Development Strategy 2011–2016 family cohesion outcomes are achieved, such as programmes to raise awareness on shared responsibility among family members, improved regulation of domestic workers and enhanced support systems for families with members who need special care.

Target

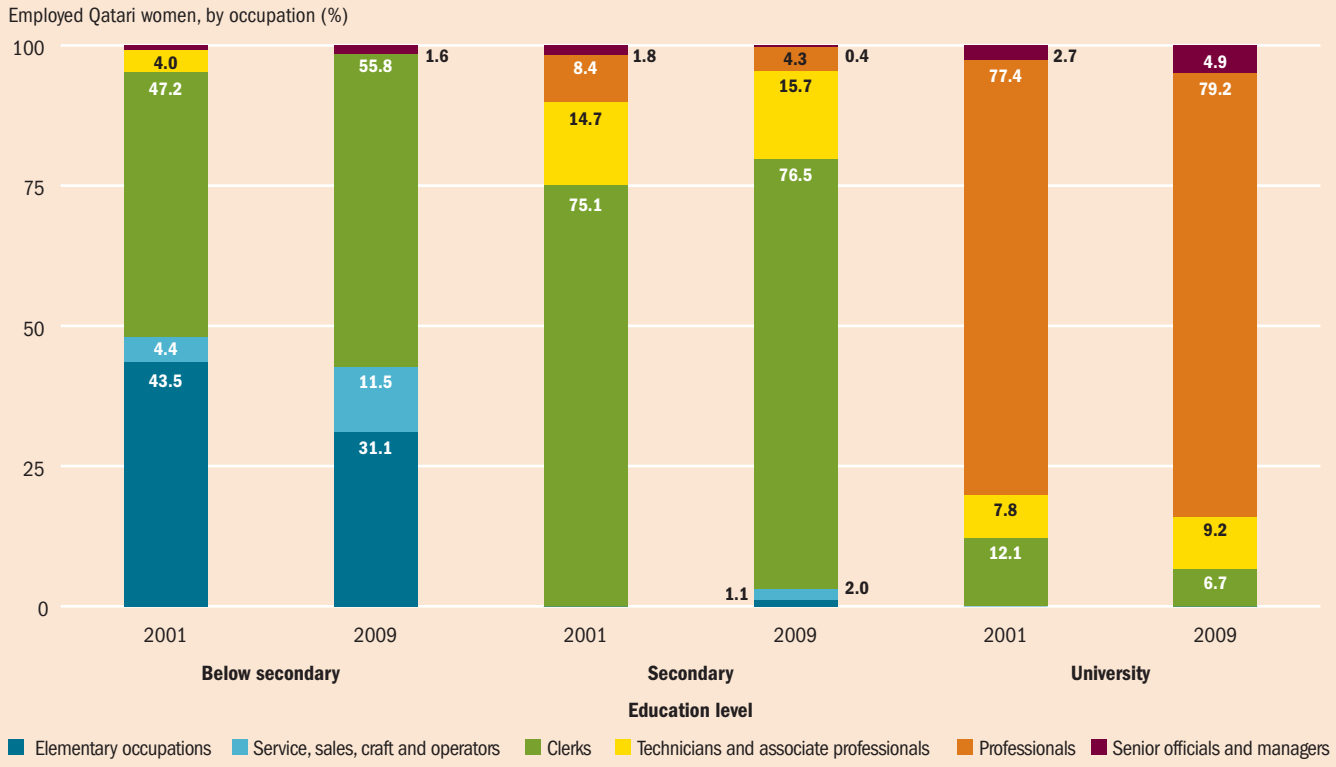
- Put in place measures that support working women, including revising the current human resources law and maternity leave policy.

Increasing women's empowerment

There is a collective recognition of women's educational ability and qualification to assume political and leadership positions, but there is also a culturally conditioned underestimation of scope and ability overall. While legislation has helped increase Qatari women's participation in the labour force (figure 5.8), traditional views about appropriate avenues for women's employment (educational, administrative or clerical) prevail, despite the new opportunities created by Qatar's economic development. Statistics show that in 2009 only 3% of economically active Qatari women had leadership posts. Over the past 10 years this number has ranged between 2% and 4%. Although women have higher average educational attainment level than men, there appears to be a "glass ceiling" in employment and promotion for women.

Another hurdle in increasing women's empowerment is overcoming the stereotyping of women's roles and responsibilities in society. Over the last decade voting participation has increased among women, and there is now female representation on the Municipal Council. The total number of women in decision-making positions has increased, but women still face barriers to political life, such as a lack of awareness of the significance of the political process and adverse social and cultural attitudes. In a 2007 survey 28% of Qatari men and women opposed female participation in politics. Women are no doubt central to the evolving character of the Qatari family, but there is much more that women can contribute to society apart from their role in the home.

Figure 5.8 Qatari women with a university education are employed mainly as professionals



A women's leadership programme

The government will establish a women's leadership centre to build women's capacity and increase the number of women in political, organizational and business-related decision-making positions. At the same time, an awareness programme will promote the role of women across all National Development Strategy 2011–2016 sectors. Other countries are implementing similar initiatives, including Malaysia, where a range of gender studies, skills training and sensitization programmes were proposed in the recent Tenth Malaysia Plan, 2011–2015. Such measures are intended to remove cultural barriers and obstacles blocking women's progress and to create an enabling environment for professional and personal growth.

Target

- Increase the number of women in leadership positions by 30%.

A programme to change public perceptions of women

The perception of women's roles in Qatari culture will be enhanced through civil society organizations' advocating for women's issues and through awareness campaigns and educational media programmes that promote women as positive role models and professionals.

Also, gender-sensitized legislation will be developed to encourage more women to take active roles in society, and a thorough review of gender equity in public sector employment will serve as a first step in removing existing social and cultural barriers.

Target

- Establish a civil society organization that promotes women's issues.

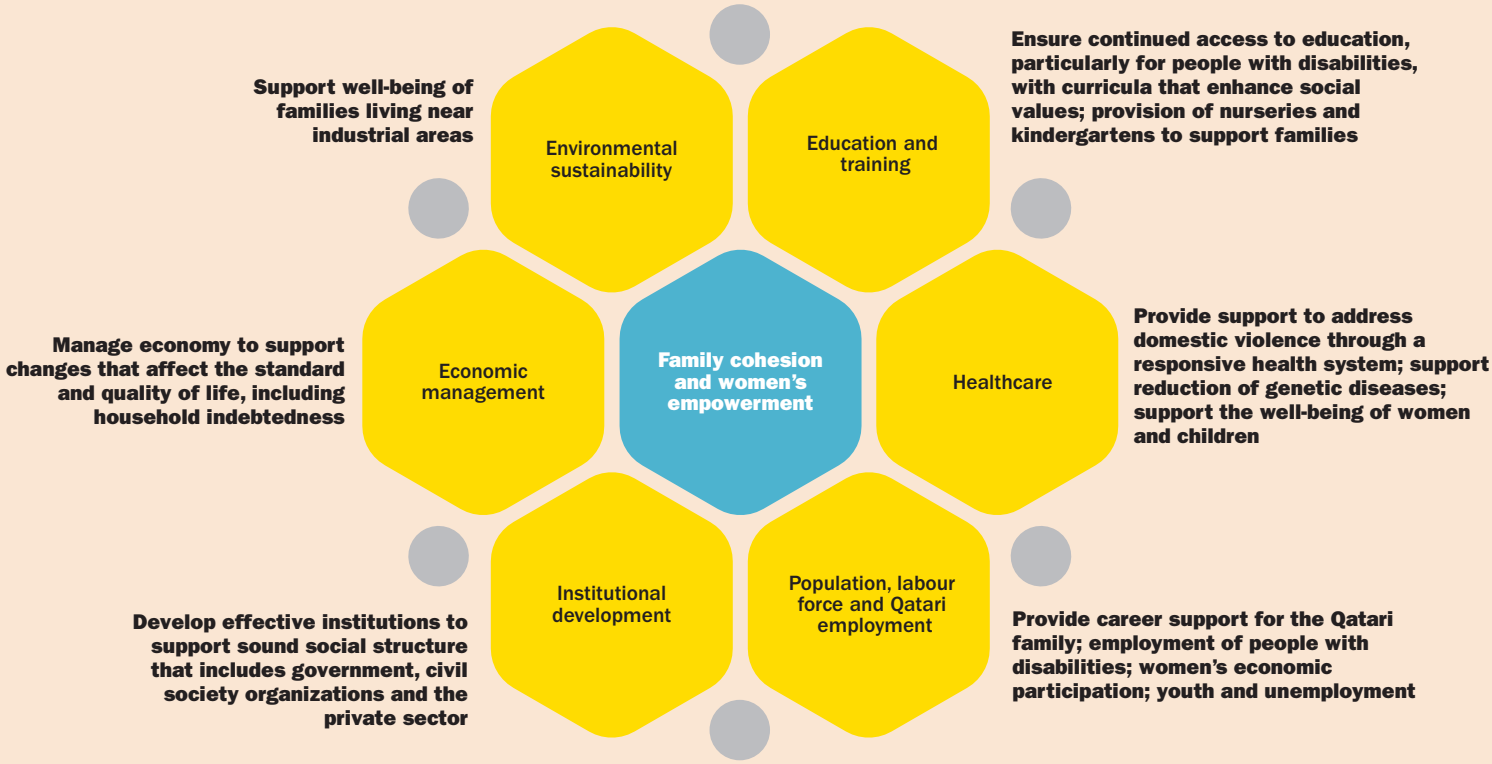
Fostering cross-sectoral links

The institution of the Qatari family, with its strong Arab and Islamic identity, is an integral force in economic and social progress. *QNV 2030* supports the maintenance and continued development of strong and cohesive families with an expanded role for Qatari women in national development. Investments in women's advancement and empowerment have been shown internationally to lead to many positive development outcomes and to support economic growth.

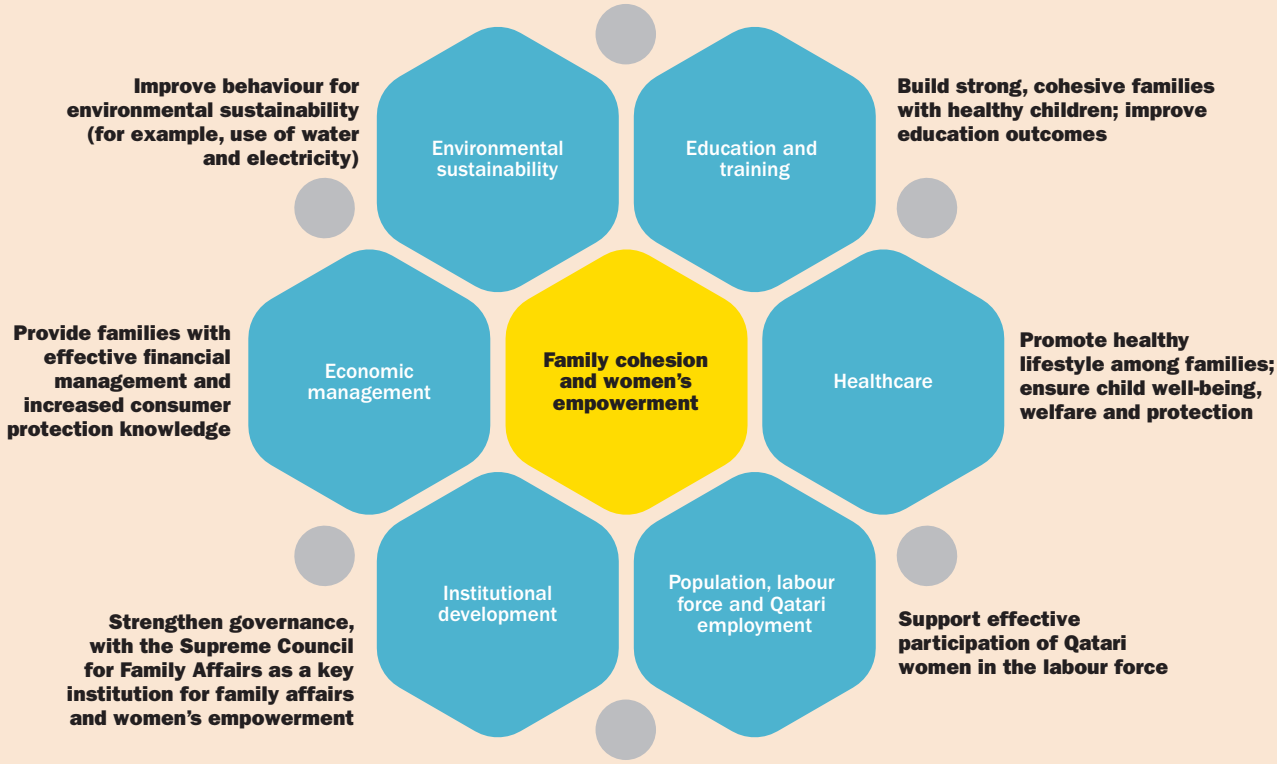
The family cohesion and women's empowerment sector will be key in meeting the goals of the social development pillar by enhancing Qatar's sound social structure and by contributing to the country's social care and protection. But given the influence that family and women's issues can also have on economic, environmental and human development policies, several cross-sectoral links can be identified that demonstrate how family cohesion and women's empowerment is both a goal and an enabler to achieve the aspirations of *QNV 2030* (figure 5.9).

Figure 5.9 Family cohesion and women's empowerment is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for family cohesion and women's empowerment



Family cohesion and women's empowerment as an enabler for other sectors



Social safeguards for a caring society

Qatar "aspires to advance and develop the social dimensions of its society by nurturing Qatari citizens capable of dealing effectively and flexibly with the requirements of the age they live in".—Qatar National Vision 2030

The social capital of a society includes the institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development. Within that network Qatari families are an important and critical link. But families are complemented by the wider community, public institutions and the more malleable aspects of social capital, such as relationships, attitudes and values. During periods of rapid modernization and development, social capital can change, potentially affecting those vulnerable to falling into low-income situations. Protecting individuals from risks that may affect their ability to contribute to society and assisting individuals in need are the central components of Qatar's commitment to community care and career support.

QNV 2030 takes a holistic approach to development, foreseeing that sustainable development will embody an effective social safety net for all Qataris. In providing a medium-term framework, the National Development Strategy 2011–2016 will make a firm commitment to establishing a social protection system that preserves the civil rights of all citizens, values their contribution to society and ensures an adequate income for them to maintain a healthy and dignified life. Qatar will meet this commitment to its people through three overarching outcomes and 10 priority social protection projects in which the government will:

- Improve and strengthen the current social protection system.
- Create an enabling environment to integrate and mainstream the disadvantaged and vulnerable groups into the workforce and society.
- Broaden participation through smart partnerships, including the private sector, in support of the social protection system.

In general, there is a perceived decline of social capital within Qatari society. As Qatar's economic and global stature increases, so do the challenges to traditional values that accompany this new prosperity. A strong common value system is thus needed to ensure that the social capital network will encourage confidence building and social cohesion.

Improving and strengthening the social protection system

The National Development Strategy 2011–2016 recognizes that an effective social protection system requires a coordinated, multistakeholder approach whereby responsibility does not rest in any one ministry or agency (table 5.1). An ongoing effort is necessary to ensure national legislation and initiatives remain consistent with Qatar's rapidly transforming socioeconomic context.

The current system, led by the Ministry of Social Affairs, provides generous support to citizens through various means, including a noncontributory cash transfer system for disadvantaged and vulnerable groups, economic empowerment programmes, job-matching services and more (figure 5.10). Various charitable organizations and civil society organizations also provide services, in addition to the Zakat Fund and Endowment Fund (table 5.2).

The social protection system is comprehensive, but it needs to be progressively improved in line with the country's development. The government must be certain that its social safety net is reaching everyone in need, and it must be proactive in ensuring that benefits are aligned to Qatar's rapidly changing economy (figure 5.11).

Though recent efforts have been made to strengthen the social protection system, such as the establishment of a rehabilitation programme for released Qatari prisoners, much more work will be done. For example, more work-training

Table 5.1 Qatar's social protection system is supported by multiple institutions and organizations

Key components	Subcomponents	Institutions involved
Social services	• Healthcare • Education • Goods and services • Programmes for economic empowerment of target groups	• Supreme Council of Health • Hamad Medical Corporation • Supreme Education Council • Ministry of Social Affairs • Ministry of Labour • Ministry of Endowment and Islamic Affairs
Social Security	• Noncontributory cash transfers to vulnerable groups (for example, widowed women, families with no breadwinner, orphans)	• Ministry of Social Affairs
Social insurance	• Pensions for civil servants and government-linked companies • Pensions for private corporations • Unemployment benefits	• General Retirement and Social Insurance Authority
Social capital	• Support through family, religious institutions and the like	• Supreme Council for Family Affairs • Ministry of Endowment and Islamic Affairs
Civil society organizations and charitable organizations	• Social protection–related programmes for vulnerable groups by civil society organizations and charitable organizations	Examples include: • Social Development Centre • Social Rehabilitation Centre • Qatar Foundation for Child and Women Protection • Qatar Red Crescent

Figure 5.10 A noncontributory cash transfer system targets vulnerable groups

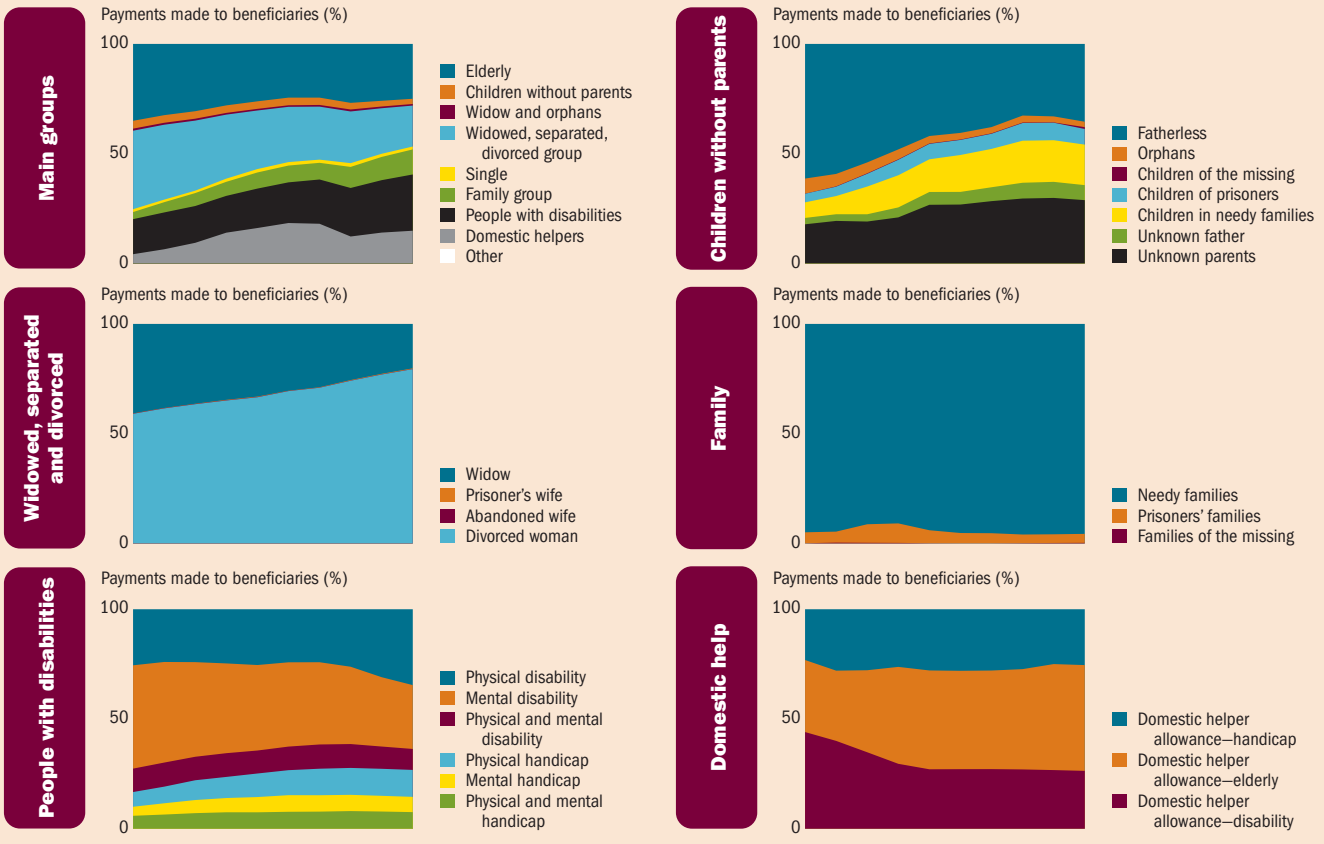
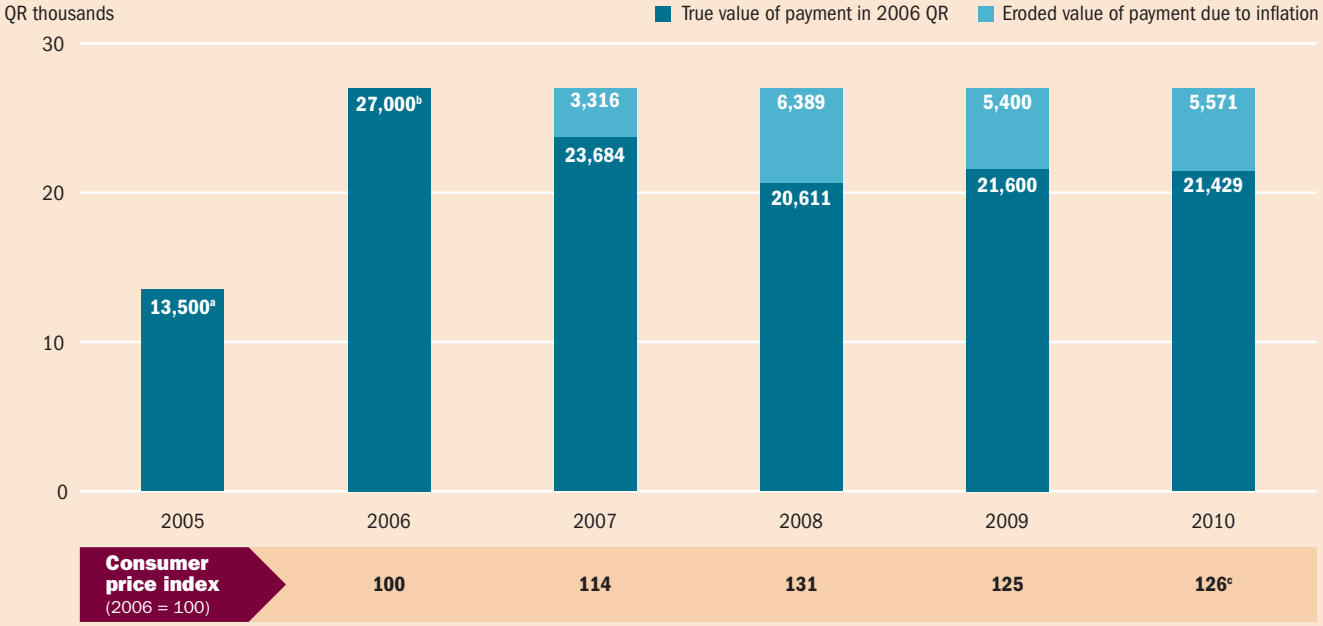


Table 5.2 Various civil society organizations support Qatar's social protection system

Civil society organization	Programmes	Key target groups	Funding information
Social Development Centre	• Income support (cash transfers) • School fees support and scholarships • Support dialysis and kidney treatment • Support fertility treatment • Loan repayment support to women	• Persons with disabilities, elderly, low income • Expatriate low-income students, orphans • Expatriate kidney patients, Qataris, expatriate low-income families • Women imprisoned due to debt	• Qatar Foundation • Philanthropists
Social Rehabilitation Centre	• Treatment and rehabilitation of behaviour disorders • Support youth development programmes (such as Message to All Youth programme) • Second Chance Programme for drug addicts	• Persons with behavioural disorders • Youth • Drug addicts in and out of prison	• Government
Reach Out to Asia	• Adult English literacy programme for low-income migrant workers • Ramadan Project to support and assist communities, build capacity of community partners, increase understanding of value of community service	• Key beneficiaries include Qataris (as per Social Security Law) and expatriates (low income, women and persons with disabilities) • Migrant workers	• Sponsors
Qatar Foundation for Child and Women's Protection	• Psychological treatment and social rehabilitation for victims of domestic violence • Awareness campaigns on human rights and violence against women and children • Capacity building programmes on violence against women and children	• Victims of domestic violence, especially children and women	• Government

Figure 5.11 Benefits must be regularly reviewed against inflation to maintain annual purchasing power



a. Previous cash benefits of QR 1,125 per month.

b. Revised cash benefits of QR 2,250 per month.

c. Estimated.

Source: Consumer price index, estimated from IMF, World Economic Outlook Database (2010).

programmes for people with disabilities are needed, as are better vocational rehabilitation institutions to prepare vulnerable people to be integrated and mainstreamed into the workforce.

Also, there is currently no effective social protection level measurement system to provide detailed and accurate accounting of the needs of the disadvantaged and vulnerable. A national poverty line to help determine a monetary social protection floor for Qataris is one solution (table 5.3).

Such evidence-based measurements will provide more empirical measurements to inform future social policy and help identify primary characteristics of needy households, such as educational attainment or household size (table 5.4).

Through its commitment to community care and cohesion, Qatar will put in place a better integrated social protection system by improving the current structure to address all aspects of social integration and to lay the foundation for other social protection goals and National Development Strategy 2011–2016 projects to be accomplished.

Table 5.3 A threshold-relative national poverty line helps identify those in need, 2006/2007

Category	Incidence (%)
Household	9.2
Individual	12.0
Child (under age 14)	13.7
Elderly (ages 60 and older)	13.4
Other individuals	11.0

A committee to coordinate project implementation

In support of the multidimensional characteristics of the social protection system, a multistakeholder committee will be set up to coordinate the implementation of the National Development Strategy 2011–2016 social protection projects. Its tasks will include providing policy guidance, making key decisions related to social protection issues and conducting monitoring and evaluation. The committee will lead a cross-sectoral approach to policy-making to ensure that unintended consequences of policies and programmes in other areas of government can be identified and appropriate responses made. The committee will carry out its work with an initial target of overseeing the implementation of social protection projects within the first three years of the National Development Strategy.

Target

- Establish a functioning multistakeholder committee to oversee and implement nine social protection project projects.

A review and revision of existing social protection laws

To ensure progressive improvement towards an effective and sustainable social protection system, the government will put in place a systematic mechanism to review and update the wide-ranging

Table 5.4 Evidence shows that low income is a particular problem for larger households—relatively few income earners support many dependents, 2006/2007

Number of people in household	Frequency (%)	Incidence	Incidence share (%)	Intensity	Intensity share (%)
1–2	4.5	3.3	1.6	0.1	0.3
3–4	12.3	3.9	5.2	0.6	3.5
5–6	28.2	3.1	9.4	0.7	8.9
7–8	26.7	9.4	27.3	2.4	31.4
9 or more	28.2	18.4	56.5	4.1	56.0
All households	**100.0**	**9.2**	**100.0**	**2.1**	**100.0**

set of laws that govern Qatar's social protection system. Revision of Social Security Law 38 of 1995, for example, will help ensure that benefits are aligned with changes in the economy. A monthly benefit of QR 2,250 received in 2006 has a value of QR 1,786 in 2010, after accounting for inflation. The mechanism will take into account such factors as political commitment and domestic resources.

Target

- Adopt a mechanism to review and update social protection laws.

A plan to ensure social inclusion for people with disabilities and the needy

The government will identify measures to support independent living and the social inclusion of people with disabilities in the community through an expanded network of vocational training institutions and other assistance centres that help support independent lifestyles. This plan will augment existing facilities, such as the Qatar Assistive Technology Centre (MADA), established in 2010 to improve access to information and communication technology for people with disabilities. An expanded network of vocational training institutions will help identify training and occupational therapy programmes to foster greater independence among disadvantaged and vulnerable groups. Such actions support the United Nations Convention for Persons with Disabilities, ratified in 2008, which promotes independent living and enhanced community inclusion with access to social support services. Further, awareness programmes to increase community responsibility towards inclusive development will be implemented.

Target

- Increase the number of vocational training and occupational therapy and rehabilitation centres from three to at least five.

A social protection evidence base

A two-year project will be initiated to strengthen the capacity of the Ministry of Social Affairs and related stakeholders to better monitor trends and patterns among the disadvantaged and vulnerable. The key component of this project will be the development of a national poverty threshold. Adopting a national relative poverty line will help determine a monetary social protection floor for Qataris and provide a baseline to monitor and evaluate programmes and projects established to support the needy. Currently, the government does not have a comprehensive supporting evidence base for social protection measurements in place.

Target

- Devise a set of tools that provides evidence-based measurements for income-related statistics, such as a relative national poverty line.

Making the workforce and society more inclusive

Varying degrees of disability extend throughout the Qatari population, including children, with prevalence rates remaining fairly constant between ages 10 and 50. About 4% of Qatari households include a disabled member. But people with disabilities often face discrimination, remain less educated and have insufficient access to the mainstream labour market. In 2008 Qatar ratified the United Nations Convention on the Rights of Persons with Disabilities and is a participating member of the committee that monitors its implementation. Although Qatar has made major efforts to promote and protect the rights of people with disabilities, the government recognizes the need to do more through stronger advanced job placement measures and enforcement of current law.

In addition to people with disabilities, other members of society face special circumstances that require support from the social protection system, including treated addicts, former prisoners and women in challenging situations, such as divorcées and unsupported widows—two groups at high risk of falling into relative poverty. Anecdotal evidence suggests that many pensioners also are vulnerable to relative poverty, as a large portion of the

elderly are either not in the retirement system or do not receive sufficient income to sustain them in retirement.

In general, challenges remain in raising awareness of the importance and need for mainstreaming disadvantaged and vulnerable people into society and of the value of productive contributions to society. Welfare to work programmes need to be developed together with an awareness-raising campaign to ensure their effectiveness. This is particularly relevant for Qatar, where the younger generation needs to be made aware of the importance of work and individual contribution to national aspirations. Evidence suggests that many unemployed Qataris, especially women, turn down job offers because they are perceived to be incompatible with their family lives or personal expectations.

As outlined in *QNV 2030*, Qatar's social protection system should ensure the civil rights of all citizens and value and enhance their contribution towards the country's economic and social development. The government will make the workforce and society more inclusive and ensure that it proactively addresses the concerns of those most in need through expanded employment opportunities, improved economic empowerment programmes and a comprehensive pension enhancement plan.

A jobs database for the disadvantaged and vulnerable

Stronger partnerships between the Ministry of Social Affairs and the Ministry of Labour will help provide targeted groups access to information on available jobs and positions in the labour market. The planned Labour Market Information System that is a component of the National Development Strategy 2011–2016 labour strategy will provide a cross-sectoral foundation for this initiative by matching potential employers and the target groups. Based on lessons from other countries, any successful welfare to work programme should be based on the principle of improving individual employability.

Target

- Expand the job-matching database to include all categories of the disadvantaged and vulnerable.

An awareness campaign on the importance of work

The awareness campaign will focus on three primary clusters: unemployed people, vulnerable and disabled people and Qatari society at large. Basic Islamic principles state that care and respect must be given to the vulnerable and that individuals must proactively contribute to a productive society. So it is critical that the wider Qatari society adhere to this aspect of national identity. The government will raise societal awareness about including vulnerable groups in the labour force while promoting workforce participation among all target groups. Current available programmes, such as the Productive Families Programme, will be promoted, especially among Ministry of Social Affairs beneficiaries.

Target

- Instil a more positive social mindset among citizens on the importance of work and different types of jobs.

An enhanced economic empowerment programme

Currently, most participants in the Productive Families Programme are not beneficiaries of the Ministry of Social Affairs. The government will expand this programme (which aids Qatari families and individuals with job training, support and access to markets) to include a wider group of participants, primarily targeting current beneficiaries of the Ministry of Social Affairs and women. For example, recent data show a willing attitude among Qatari women to manage private enterprises catering to other women, such as hair dressing salons, perfume stores and accessories retailers.

In addition, the Social Development Fund proposed by the Council of Ministers could provide support for this outcome by enabling the opportunity for more Qataris to become self-reliant and

productive through micro-enterprises, by promoting active and effective partnerships with civil society organizations and by helping integrate disadvantaged groups into the labour market.

Target

- Increase by 50% the number of participants in Productive Families Programme from among beneficiaries of the Ministry of Social Affairs benefits system.

An enabling environment in the workforce for people with disabilities

Stronger enforcement of the Qatari law that supports the recruitment of people with disabilities in the workplace will be instituted. Article 5 of Law 2 of 2004 mandates an employment rate for disabled people of at least 2%, but no current monitoring or enforcement system ensures that this target is being met. Given that Qatar has ratified the United Nations Convention on the Rights of Persons with Disabilities, the government is obligated to follow through on recommendations made. With a quota system already adopted, the National Development Strategy 2011–2016 provides a platform for enhanced enforcement. Reform measures could include enacting a quota-levy system, whereby a levy is imposed on companies that do not meet the quota. Countries that have enforced legislated levies have more success in integrating persons with disabilities into the workforce.

Target

- Enforce the active workforce quota of 2% for persons with disabilities.

A comprehensive pension enhancement plan

The core objectives of a pension system will be to provide protection against poverty in old age and to ensure a smooth transition from work to retirement. Currently, Qatar's formal pension system, which covers public sector and government-owned company employees, lacks a cost-of-living adjustment, so pension incomes do not keep pace with inflation. And the system does not cover self-employed people and people in the private sector. The General Retirement and Social Insurance Authority is in the early stages of planning an expansion of the pension system to include Qataris working in the private sector, but the government will conduct a thorough review of the system. Possible options for reform include improved governance of the existing system and the introduction and testing of voluntary systems or non-contributory pensions.

Targets

- Expand coverage of the pension system.
- Halve the percentage of low-income households.

Extending social responsibility to the business community

The role of the private sector in social protection is growing as businesses increasingly recognize that corporate responsibility extends beyond the workplace. Business decisions have both positive and negative impacts on people's welfare and well-being. As corporate social responsibility gains momentum globally, Gulf countries such as Egypt and Saudi Arabia have taken steps to institutionalize corporate responsibility through legislation and institutions that govern business activities.

Corporations within Qatar, especially in the energy sector, are initiating corporate social responsibility programmes and projects, and some have already started to align their corporate strategy with *QNV 2030*. The government will extend social responsibility to the business community by broadening participation of the private sector in the social protection system and by creating a corporate responsibility framework that will formalize an enabling environment for the private sector to further contribute to the well-being of Qatari society.

A framework to develop stronger partnerships

This framework will formalize an enabling environment for the private sector to further contribute to the well-being of Qatari society through various instruments and interventions, including

awareness raising (creating alignment among stakeholders), partnering efforts (bringing public and private sectors together), application of soft laws (nonregulatory promotion of measures) and mandates (establishing minimum standards for responsible behaviour). A six-step model can be applied to guide the process (figure 5.12).

Target

- Implement a corporate responsibility framework suited to the country's economic, political and social context, including a monitoring system.

Fostering cross-sectoral links

Social dialogue between the government and all stakeholders—including individual ministries, agencies, civil society organizations and the private sector—is essential to progressively developing a national social protection strategy in order to ensure a balanced and sustainable approach. An effective social protection system will not only guarantee the well-being of Qataris, it is also a precondition to the effective functioning of the country's labour market, where distortions are likely to occur, jeopardizing the country's stability and economy, if certain categories of workers are not protected. This concept is also a prominent feature in the subsequent sector strategy concerning public safety and security.

The social protection sector of the National Development Strategy 2011–2016 will play a key role in meeting the goals of the social development pillar by enhancing Qatar's sound social structure and by contributing to the country's social care and protection. But given the influence that community care and career support initiatives can also have on economic, environmental and human development policies, a number of cross-sectoral links can be identified that demonstrate how social protection is both a goal of, and an enabler of, *QNV 2030* (figure 5.13).

Figure 5.12 A six-step model to guide the development of Qatar's corporate responsibility policy framework

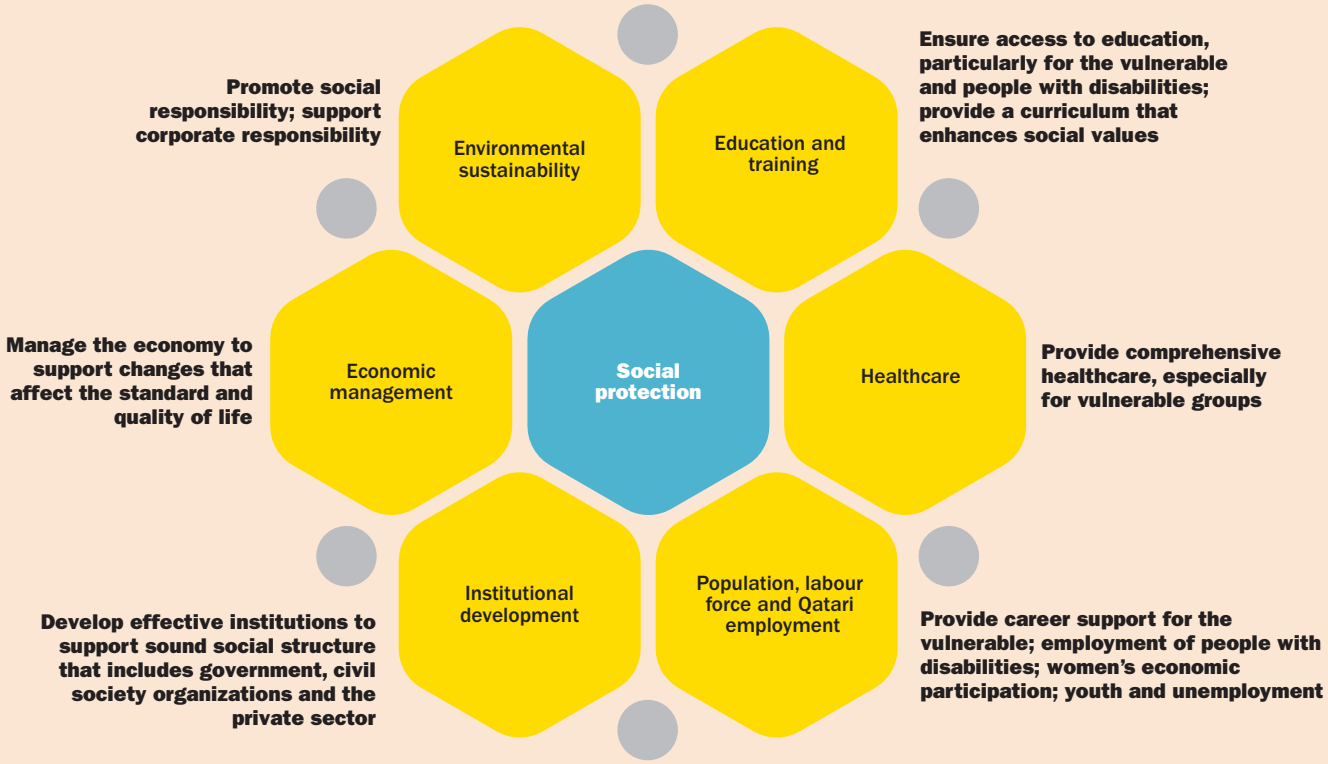
	Brief description	Supporting Qatar's corporate responsibility
Understanding corporate responsibility–relevant context	• Corporate responsibility policy should take into account economic, political and social factors of the country	• National Development Strategy 2011–2016 sector strategies provide the economic, political and social context of corporate responsibility policy
Defining corporate responsibility	• Clear definition of corporate responsibility required in both local context, as well as in line with what end goal is expected by government of companies' contribution	• Current corporate responsibility activities, especially in energy sector, help inform understanding • Aims and objectives of social responsibility as defined by Social Protection Task Team

Situating corporate responsibility within government structure	• Important to consider overall placement
	  ◦ Corporate responsibility competency (lead entity)
	  ◦ Integration of stakeholders
		• As a starting point, the proposed central social protection committee, led by the Ministry of Social Affairs to drive corporate responsibility
		• Engagement of multiple stakeholder in National Development Strategy preparation and Social Protection Task Team

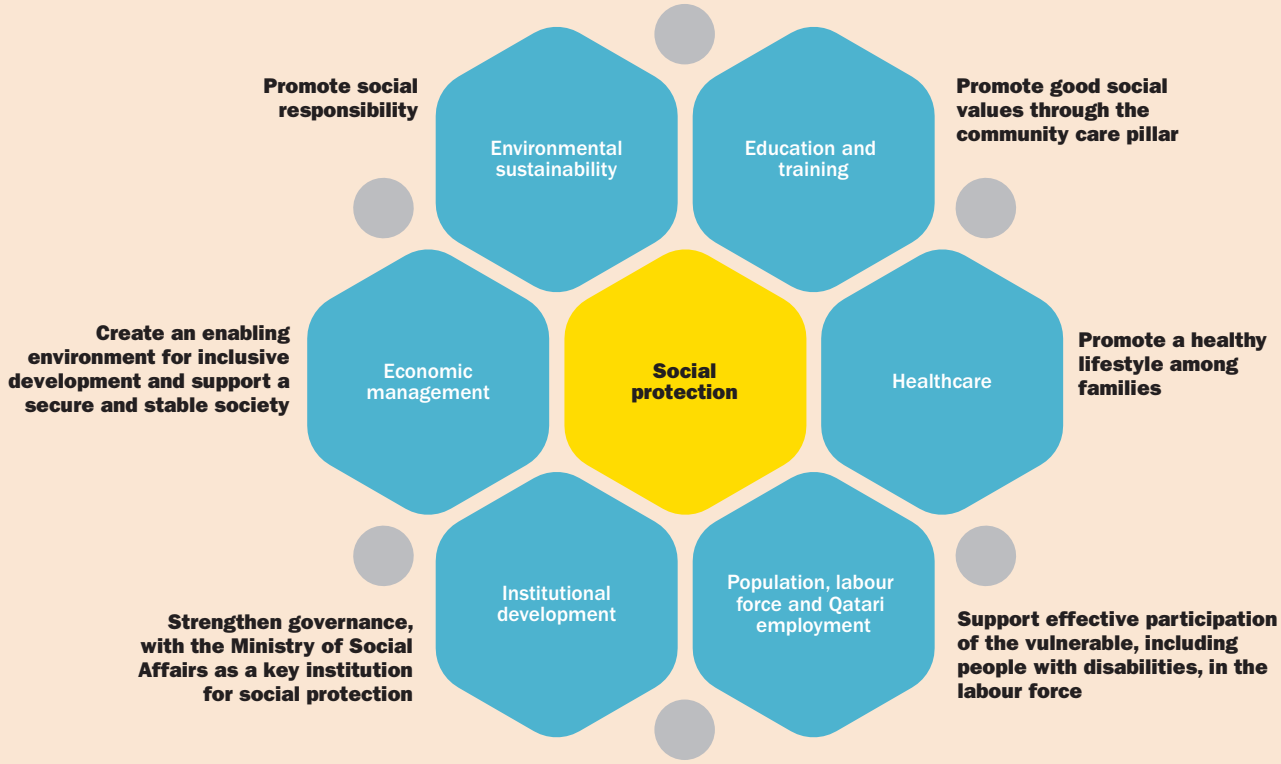
Defining corporate responsibility public policy rationale	• Government should define the rationale behind the corporate responsibility policy framework • Rationale could focus on poverty reduction or integration into the broader global economy	• The National Development Strategy 2011–2016 sector strategies provide the rationale for the corporate responsibility policy framework
Identifying types of policy intervention	• Need to clearly align on which types of mechanisms and initiatives (for example, awareness, soft law, mandating) are most effective in tackling the issues and delivering on the rationale	• Expected output of the National Development Strategy 2011–2016 social protection sector strategy
Monitoring and impact assessment	• Monitor and assess impact of interventions against goals Results from monitoring should be used to define strategy or • directional updates	• Expected output of the National Development Strategy 2011–2016 social protection sector strategy, tied in to the overall National Development Strategy monitoring and evaluation framework

Figure 5.13 Social protection is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for social protection



Social protection as an enabler for other sectors



Public protection for a stable society

"Qatar will seek to build a safe, secure and stable society based on effective institutions."—Qatar National Vision 2030

The process of providing a social development pathway for the well-being of all Qataris has been identified thus far through objectives targeting improvement on a personal or individual level—family cohesion, career support, community welfare and women's empowerment. But just as Qatar has a duty to provide its citizens with a secure and stable society based on strong families and personal safety, Qatar has a duty to provide its citizens with a secure and stable society based on effective public institutions and public safety. A society that offers its people safety and security in a respectful and dignified way and that demonstrates a duty to care for its citizens is a society that operates on the principles of justice, equality and the rule of law.

Qatar is committed to sustainable development where there is harmony among economic, human and social development and environmental protection. In an urban environment such as Qatar's, any sustainable policy should be accompanied by policies that promote safety and security to support planning and development, making Qatar an attractive place to live.

Qatar's recorded crime rates are among the world's lowest, despite a massive increase in the country's expatriate population. In 2010 Qatar ranked first within the Arab region, and 15th globally out of 149 countries, on the Global Peace Index (GPI) of the Institute for Economic and Peace. The GPI takes into account 24 indicators, including several related to public safety and security, as well as factors in the country's external relations.

The Public Safety and Security sector of the National Development Strategy 2011–2016 social development pillar plays a key role in enhancing and improving the quality of life and well-being of all citizens, particularly in ensuring that people are safe and secure in their communities. It moves away from the traditional security concept to one that embraces the concept of human security and expands the scope of protection to include a broader range of threats, including risk reduction from natural and non-natural disasters.

Qatar will fulfil its commitment to human security and to fulfilling the national vision through five overarching outcomes and five priority public safety and security projects in which the government will:

- Improve knowledge management of criminal information and data.
- Reduce the number of road traffic accidents resulting in deaths and major injuries.
- Strengthen the national approach to occupational health and safety.
- Improve building safety, including regular monitoring of regulations.
- Establish a high-level coordinated approach to national disaster management.

These public safety and security outcomes reflect priority issues where timely action is essential and multiagency integration is required. They serve a common purpose of enhancing the well-being of all citizens, and they will aid Qatar in building a sound social structure supported by effective institutions that operate under justice, equality and the rule of law.

Improving crime management

Qatar's recorded crime rates are exceedingly low. Qatar's robbery and motor vehicle theft rates are the lowest among Gulf Cooperation Council countries.

Not surprising, given the large increase in the number of expatriates, there has been an increase in immigration and residency violations. Leaving immigration and residence violations aside, crimes "against the human body" and "drugs and drinks" constitute the largest share of crimes (table 5.5).

Table 5.5 Crime has been relatively stable over time, but violations in immigration laws have increased markedly

	Ministry of Interior						Overseas Security Advisory Council	Supreme Judiciary Council		
Type of crime	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Committed by public servants	68	73	46	40	49	35		70	114	29
Against human body	151	148	11	94	118	60		957	1,278	798
Sexual and moral crimes	218	208	356	396	264	131		147	173	113
Against others' money or property	263	192	142	180	225	168		130	70	–
Drugs and drinks	416	397	440	431	320	205	3,976	1,026	994	669
Against public trust	1,000	727	547	632	879	808		96	206	336
Subtotal	**2,116**	**1,745**	**1,542**	**1,773**	**1,855**	**1,407**		**2,426**	**2,835**	**1,945**
Immigration/residence violations	192	153	127	136	44	62		9,222	6,882	8,164
Total	**2,308**	**1,898**	**1,669**	**1,909**	**1,899**	**1,469**	**3,976**	**11,648**	**9,717**	**10,109**

– not available.

Note: Excludes traffic violations. Data refer to criminal court cases, not police-recorded crimes.

Source: Overseas Security Advisory Council, *Qatar 2010 Crime and Safety Report* (2010).

When immigration and residency violations are excluded, crime totals show a more even pattern for 2007–2009.

Compared with global levels, Qatar consistently has much less of all major types of crime (table 5.6). The low rates of crime and high levels of public security reflect in particular the country's sociopolitical stability coupled with its effective security services.

Low national crime rates in some categories, however, may reflect in part Qataris' unwillingness, especially among women, to report certain incidents to law enforcement officials. Further, in a society where the family unit is paramount to its structure, such as in Qatar and other Gulf States, citizens may sometimes prefer handling incidents at a family level.

The recording of crime data needs to conform to international standards that specify detailed cross-classifications. This entails, for example, clear categorization of recorded crime by suspect, victim and type. To further enhance the effectiveness of the criminal information system, routine crime data could be systematically shared across government ministries and agencies. To maximize public safety and security efforts, the government will improve its criminal knowledge management system through a centralized database to eliminate gaps and enhance policing procedures. A knowledge-sharing committee will guide its development.

Table 5.6 Qatar's crime rates are well below global average levels (incidence per 100,000 people)

Type of crime	**2007**	**2008**	**2009**	**Global average**
Intentional homicide	2.0	0.5	0.4	6
Assault	1.6	3.8	1.7	100
Rape	1.6	0.9	1.7	25
Kidnapping	0.3	0.6	0.7	25
Robbery	86.0	25.0	11.0	100
Arson	0.9	0.3	0.1	25

Source: United Nations Surveys of Crime Trends and Operations of Criminal Justice Systems (2009).

A criminal knowledge management system

This integrated system will eliminate data and information gaps, enable identification of emerging trends, strengthen policing efforts, reduce the time taken to prepare files for court and expedite case resolution. It will enable court administrators, criminologists and others in law enforcement to adjust operations and strategies based on accurate, timely and up-to-the-minute crime information. Specifically, the new management system will:

- Establish a knowledge-sharing group.
- Standardize crime definitions and classifications.
- Develop a centralized crime statistics database.
- Establish training programmes for criminal justice agencies and staff.

An open-door policy for users will be essential to the success of the system; an accessible system will enable more frequent cross-agency and international collaboration, leading to better outcomes for those in the criminal information system and to a safer society.

The government will create a central coordinating body for criminal intelligence and information to administer the system and ensure that strict privacy is maintained, that confidentiality and other safeguards are in place and that consistent regulations are applied to the treatment of classified materials. The system will be preceded by legislation and written guidance on the gathering, storage, analysis and dissemination of criminal intelligence or information by or for the purposes of law enforcement.

The management system will be the first step towards a holistic approach that encompasses a one-stop shop for police, prosecution, defence lawyers, courts and correctional facilities, all of which currently have individual, nonintegrated information management systems. This future holistic system will, in turn, be the forerunner to an eventual e-justice platform.

Target

- Have in place a comprehensive criminal knowledge management system based on international standards.

Improving road traffic safety

Road safety has been given high priority for some years in Qatar through extensive safety and awareness campaigns and more aggressive law enforcement, which over the last three years has helped reduce fatalities to their lowest mark in two decades. But road accidents involving at least one vehicle and resulting in damage and injury have been increasing for the last five years (figure 5.14) as population growth has led to more congested roads. While the 2008 fatality rate of 15.9 deaths per 100,000 people is a fair national result for Qatar, it is still markedly higher than the average for high-income countries (table 5.7). Qatar's pedestrian death rate (32% of all fatalities) has remained steady over five years but is still very high by international standards.

The main causes of road accidents have remained much the same over time, with reckless driving, crossing the median strip, insufficient distance and lane changing errors (at roundabouts and on higher speed roads) responsible for more than 90% of accidents. Pedestrian fatalities and accidents are of particular concern in Qatar, with 32% of casualties being pedestrians, compared with a worldwide average of 17%. These pedestrian accidents are closely related to the number of safe crossing points; more needs to be done to reduce the likelihood of road trauma for pedestrians and drivers alike (table 5.8).

The number of heavy vehicles using roads has also increased, causing additional safety issues due to either insufficient oversight or ignored laws (a lack of dedicated truck routes, overloaded vehicles, exceeded size restrictions, illegal parking in residential neighbourhoods and the like). Until further public bus routes are opened or other public transport options come into effect, traffic congestion will continue to increase if additional capacity is not added to the road network or if vehicles are not taken off the road. The government will improve road traffic safety with a safe-system approach that will reduce risk behaviour, improve pedestrian safety, enhance roads and strengthen law enforcement.

Figure 5.14 Road accidents involving at least one vehicle and resulting in damage and injury have been increasing since 2003

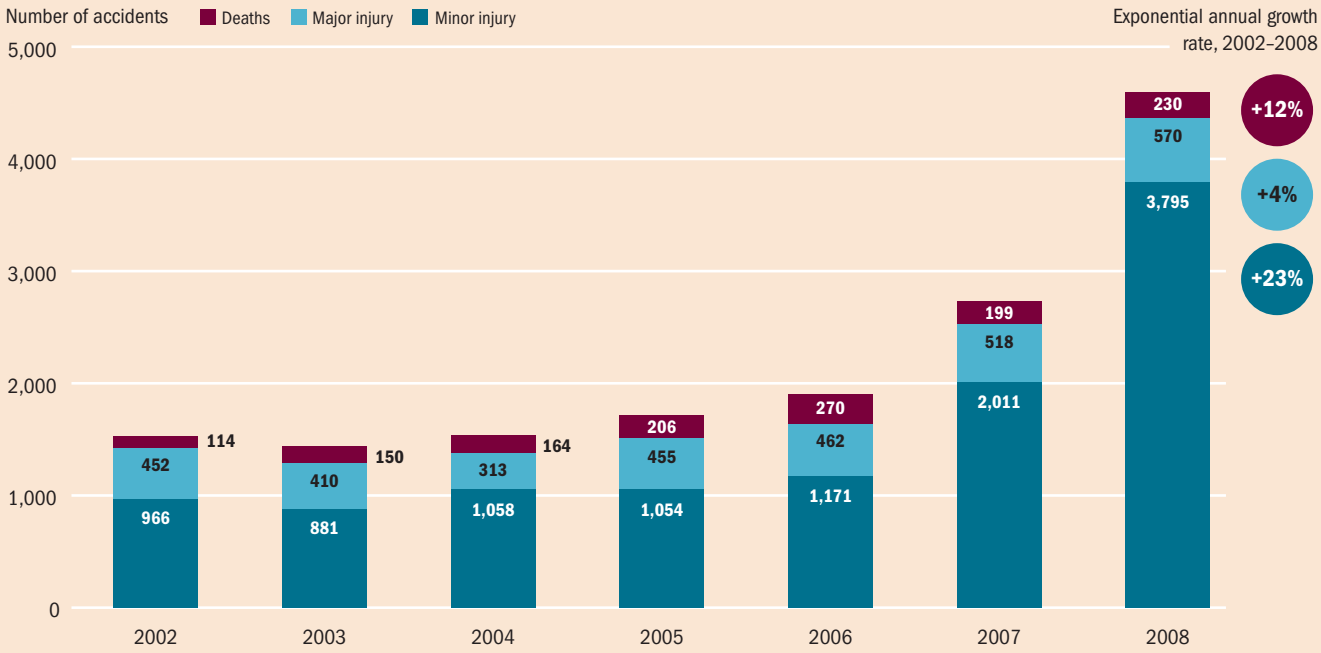


Table 5.7 Qatar's road traffic injury fatality rate is markedly higher than the average for high-income countries (deaths per 100,000 people, 2008)

	Eastern Mediterranean region	World	Qatar
High income	28.5	10.3	15.9
Middle income	35.8	19.5	na
Low income	27.5	21.5	na
Total	**32.2**	**18.8**	**15.9**

na is not applicable.

Source: WHO, *Global Status Report on Road Safety: Time for Action* (2009).

Table 5.8 Slightly more than a third of Qatar's traffic fatalities in 2008 involved pedestrians

Age group	Drivers	Passengers	Pedestrians	Total
0–1	0	0	0	0
1–9	0	0	1	1
10–19	10	4	3	17
20–29	36	4	4	44
30–39	21	15	14	50
40–49	13	19	20	52
50–59	8	14	21	43
60–69	3	8	11	22
Not stated	0	1	0	1
Total	**91**	**65**	**74**	**230**

A safe-system approach to road traffic safety

The National Development Strategy 2011–2016 will reduce traffic accidents and improve safety through a comprehensive strategy of intragovernmental cooperation, raised awareness, improved safety measures and stronger laws that accomplish several basic, necessary objectives:

- Reducing risk-based behaviour.
- Instilling courteous driving behaviour.
- Improving the safety of pedestrians.
- Better protecting children and young people who are greatly overrepresented in casualty statistics.
- Facilitating intergovernmental cooperation in traffic safety, particularly in urban planning, municipality management, traffic policing, public works design and construction and education.

The safe-system approach makes better use of police resources (and adds extra capacity where required) to reduce motorist risk through better enforcement of speed limits, seatbelt laws, mobile phone bans while driving. The government will identify and target the roads most in need of upgrade and ensure that roads are well lit and sufficiently signed. An address system based on GIS Qatar Mapping will be studied to minimize driver distraction while searching for locations. The system will also be used to categorize roads as major, secondary or local and to identify problem areas in order to improve future planning.

The safety strategy will also analyse and study the number of stop signs, traffic lights, road markings, road shoulders and footpaths, vehicle safety regulations, provisions for pedestrians and cyclists, driver licensing systems, driver training procedures and punishment standards for violations.

Target

- Reduce the annual number of road accidents from 300 per 100,000 people to 250 and related fatalities from 14 per 100,000 people to 10.

Strengthening occupational health and safety

Just as residents of Qatar should be protected with measures that guarantee their safety while driving, biking or walking, Qatar workers should feel safe and secure while in the workplace. The National Development Strategy 2011–2016 provides the government an opportunity to strengthen the occupational health and safety of workers—by protecting employees from potential work-induced disease, injury or death—and to better address the dangers associated with risky jobs. Noncompliance with health and safety measures can negatively affect the economic and social development of Qatar through direct losses in physical resources, employee productivity and reputational damage. The government will look to mitigate those impacts.

According to the Ministry of Labour, 22 work-related deaths and 173 injuries were reported in Qatar in 2008 and 2009. The Supreme Council of Health regularly and randomly visits more than 500 worksites and workplaces annually, but the country's labour law does not impose specific industry standards and excludes casual and domestic workers from its scope. Further, Qatar's industrial mix is dominated by heavy industries, such as oil and gas, metals manufacturing and construction. These sectors typically present a more dangerous or riskier work environment than other sectors and require a strict and comprehensive safety framework. The National Development Strategy 2011–2016 will build on recent efforts to improve workplace safety by strengthening standards as part of a new governance system.

A national occupational safety and health governance system

To harmonize and unify workplace regulations and practices, Qatar's Council of Ministers has approved in principle the establishment of the National Occupational Safety and Health Committee, to be composed of representatives from across government ministries and the oil and gas sector. This committee is the first step towards a

national set of laws, regulations and standards on occupational health and safety. The regulations will be specific and strict and will include all sectors and workers in the country. The governance system will create a centralized interactive database of incidents, accidents and diseases and require mandatory reporting of all workplace incidents and accidents. The government will also strengthen laws to better enable the legal enforcement of regulations and to ensure that all line managers in key sectors are held responsible for accidents and are punishable for neglect.

Target

- Establish a national set of regulations, laws, and standards on occupational health and safety for all sectors.

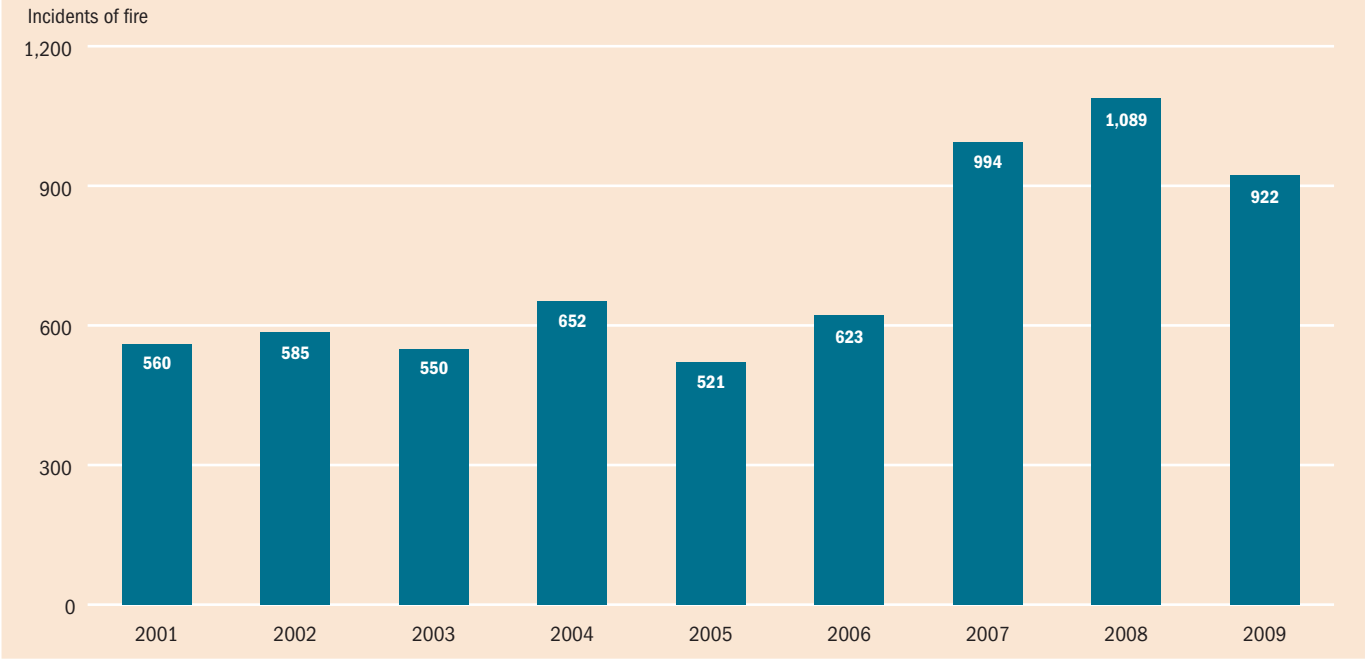
Enhancing building safety standards

Concurrently, the government will better regulate the safety architecture of Qatar's construction sector, which also continues to flourish. The global financial crisis has somewhat slowed the pace of building in Qatar, but projections show more than 120 major construction projects targeted for completion by 2016. More experienced personnel are needed and more government authorities should have a role in supervising the building process and in issuing permits in order to strengthen the institutional knowledge gap and improve building safety. Of central concern are fire-related accidents, which peaked during the 2007–2008 construction boom and remain a primary cause of building accidents (figure 5.15).

A national building safety strategy

This strategy will begin with a comprehensive review to determine common causes of construction site fatalities over the last five years and to examine which government agencies are best positioned to help reduce future accidents. A national committee for fire prevention will be established to lead several initiatives aimed at reducing the prevalence of fires, beginning with stronger standards to regulate appliances and equipment, installation and maintenance of electrical systems, and certification for technicians. Procedural guides will offer instructions for working with voltage lines and underground cables and for establishing escape and rescue operations.

Figure 5.15 Fire-related accidents peaked in 2008 during the construction boom



In addition to stronger fire-related regulations, the safety strategy will include capacity building and enhancement components for the Ministry of Labour's Work Inspection Organ, which will be strengthened with more health and safety inspectors. These inspectors will be empowered to issue fines, conduct follow-up audits and recommend revoking operating licences in the event of multiple safety violations. In addition to safety inspectors, trained officers must enforce the law through routine and random checks. Tougher penalties will be considered, including lengthier imprisonment where fatalities occur.

Targets

- Create a comprehensive approach to building safety, and halve the number of fire accidents.

Coordinating national emergency preparedness

In most instances the development outcomes for the National Development Strategy 2011–2016 involve improved results for the directly tangible aspects of everyday life—family support, career training, police protection. But a critical component of establishing a secure and stable society for current and future generations is also consideration of how to best ensure long-term human protection.

Although Qatar may be at low risk of natural disasters, such as earthquakes, tornadoes and hurricanes, it remains exposed to medical and health hazards and its own extreme climate conditions. Furthermore, Qatar's location, its natural resources and its industrial sector puts the country at risk. The Permanent Emergency Committee, consisting of representatives from 17 Qatari organizations, has been in operation since 1998 to deal with emergency threats, but a more coordinated approach to disasters will reduce the potential human, social, economic and environmental impact that would result in extended societal disruptions. In order to ensure the long-term social development and stability as envisioned in *QNV 2030*, the government will coordinate national emergency preparedness measures in the event of any situation that disrupts normal socioeconomic activities.

A coordinated disaster management policy

The National Policy on Disaster Management will develop a framework for sustainable efforts towards a unified plan for all stages of a national disaster—prevention, preparedness, response and recovery. The framework will support a holistic and integrated approach to include quantitative elements such as research and development and will ensure that disaster risk reduction policies are included in socioeconomic planning and programmes. Civil society participation in creating the policy will involve local communities, raising awareness on the importance of disaster management and risk reduction.

Target

- Establish a national policy on disaster management.

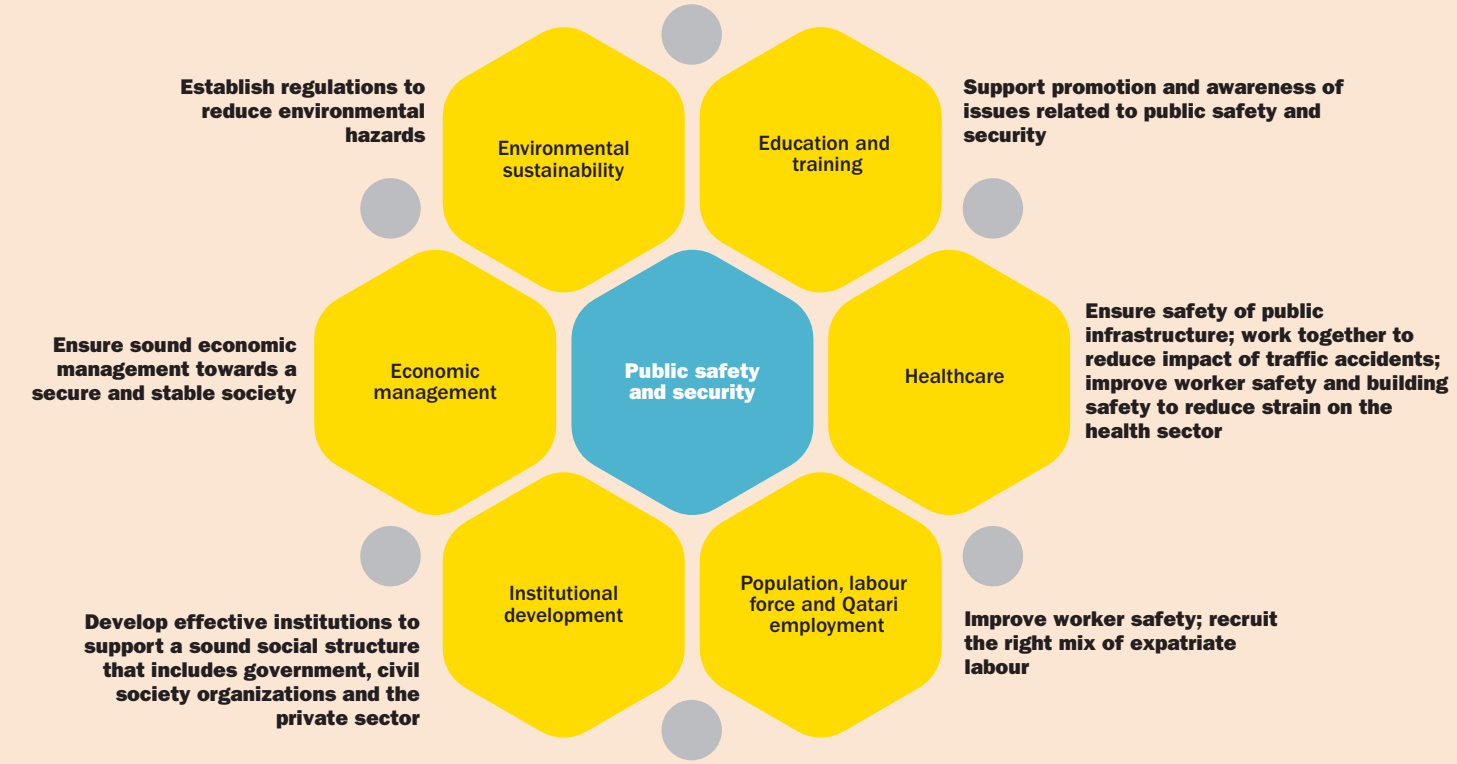
Fostering cross-sectoral links

The government recognizes the imperative need to promote safety and security within Qatar's urban environment, which is undergoing rapid change due to robust economic development and socioeconomic shifts. These and other factors, including globalization and increased use of digital technology, will make public safety and security an ongoing challenge in the years ahead. To best make citizens feel secure in their communities, which include both home and the workplace, efforts must include multiple stakeholders across all social sectors.

The public safety and security sector will be key in meeting the goals of the social development pillar by enhancing Qatar's sound social structure and by contributing to the country's social care and protection. But given the influence that issues such as crime prevention, law enforcement and occupational safety can also have on economic, environmental and human development policies, several cross-sectoral links can be identified that demonstrate how public safety and security is both a goal of, and an enabler of, *QNV 2030* (figure 5.16).

Figure 5.16 Public safety and security are both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for public safety and security



Public safety and security as an enabler for other sectors

Sports as inspiration for an active and healthy society

Qatar will "develop a spirit of tolerance, constructive dialogue and openness towards others at the national and international levels".—Qatar National Vision 2030

Qatar aspires to build a safe, secure and stable society and firmly commits to creating a vibrant and prosperous future for the country. Fulfilling that vision begins with strengthening families and ensuring that all citizens are protected in their homes, jobs and communities. Next is to ensure long-term excellence beyond the essentials of family and finances by enhancing the physical, emotional and intellectual well-being of society through sports and culture. Physical activity occupies a central role in enriching lives, with participation in sports being a source of health and enjoyment for those who join as players, volunteers, coaches, observers, officials or administrators. It is often a binding element in the social and cultural fabric of society, at the community level as well as on the international stage.

Qatar has enjoyed unprecedented global recognition in sports in recent years. Qatar invests heavily through the Qatar Olympic Committee and its partner clubs, sports federations and other strategic allies to provide sports and recreation facilities, develop athletes, host international competitions and raise awareness of the benefits of sports and physical activity. Qatar will continue to emphasize sports, especially to meet the challenges presented by a growing population undergoing significant cultural change. Qatar is committed to increasing sports participation and active lifestyle practices among its population to improve health outcomes and to forge global friendships and improve relations with countries around the world.

By developing an array of first-class sports facilities and continuing to host regional and international competitions and events, Qatar will be well positioned to meet *QNV 2030*'s goal of a spirit of tolerance, constructive dialogue and openness through the common sporting principles of teamwork, fairness and aspirational excellence.

In January 2011 Qatar successfully hosted the coveted Asian Football Confederation's Asian Cup. Qatar's winning bid to host the FIFA World Cup 2022 will support not only the achievement of development programmes and projects in other sectors, but also the enhancement of social development in general and sports in particular. Hosting regional and international sporting events encourages greater Qatari participation and interest in sports and enhances the nation's regional and international image in promoting cultural and sporting interchange.

The sports sector of the National Development Strategy 2011–2016 social development pillar, therefore, plays a key role in enhancing and improving the quality of life and well-being of all citizens by providing the necessary foundation for active lifestyles and athletic development. Qatar will advance its sports policy through three overarching outcomes and five priority sports projects in which the government will:

- Educate and engage the public on the importance of healthy and active living and increase opportunities for people of all ages and abilities to participate in physical activity.
- Ensure adequate, appropriate and accessible sports and recreation facilities.
- Increase sports talent and enhance talent development and athlete sponsorship programmes for improved sporting success.

A sound management framework for sports development is essential for building a modern and progressive state. Cross-sectoral alliances are also essential for maximizing the benefits that a physically fit and athletic society will yield. A coordinated interagency approach that gives public and private agencies a shared responsibility in sports development will yield great success, as will awareness of the need for a knowledge-based approach to capacity building for both officials and coaches.

Promoting healthy and active living through sports

Sports is a powerful tool for building a healthy and cohesive society. Being physically active provides people with a range of physical, social and mental health benefits. In particular, children and young people can gain more from physical activity than just improved physical health. Involvement in sports from an early age helps build character and discipline in children that can be applied in other aspects of their lives. Qatar has a growing, young and increasingly affluent population with ample leisure time, but participation in sports and physical activity is low. Chronic diseases are a major cause of death, accounting for 49% of classified deaths in 2008 (figure 5.17). The primary drivers for the chronic disease burden are inactivity and sedentary lifestyles, which pose an increasingly serious health risk for individuals and families.

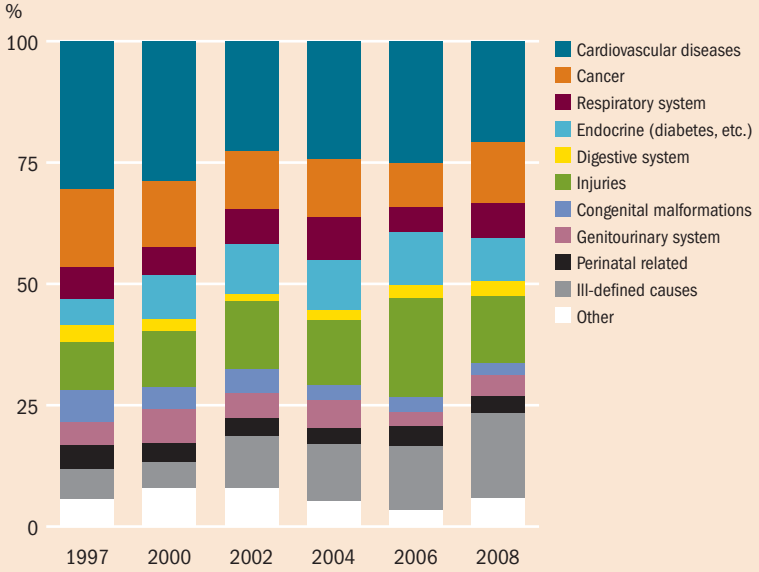
In 2007 the Supreme Education Council undertook a major review of the national physical education curriculum and related activities in independent schools and community centres. This review involved an audit of teaching and learning quality, followed by a comprehensive needs analysis. A new physical education framework was subsequently implemented. Physical education is now compulsory in all schools from kindergarten through year 12. A strategic plan for improving the quality of physical education taught in schools was also prepared in order to address the challenges faced by policy-makers, school leaders, teachers and parents in promoting sports among Qatari youth.

Women play a critical role in promoting healthy lifestyles through their influence on their children's health and well-being. Concerned about the fitness and health of Qatari women and how this affects their children, in 2009 the Qatar Olympic Committee initiated an in-depth study on their participation in sports and physical activities. The study found that just 15% of Qatari women ages 15 and older regularly participated in sports (figure 5.18).

To improve the overall health of the population, there must be a mutual commitment between the state and its citizens to appropriately modify lifestyles. There must also be a commitment for

Figure 5.17 Lifestyle change through sports education and awareness is key for a healthier population

Cause-specific death rate



A number of worrying population trends are evident

High caloric intake
- 39% of adults are overweight
- 32% of adults are obese or morbidly obese

Smoking
- 37% of male adults smoke
- 22% of male youths smoke

Sedentary lifestyle
- Over 50% of population do not engage in regular physical activity

Health illiteracy
- Limited knowledge of health issues
- Limited awareness of management of diseases

Note: Changes in disease classification in 2002 resulted in the ill-defined category growing at the expense of the cardiovascular and cancer categories. Chronic diseases include cardiovascular, endocrine (such as diabetes) and respiratory diseases as well as cancer.

Figure 5.18 Social and community influences limit Qatari women's participation in sports

Regularity of participation in sport and physical activity of Qatari women ages 15 and older, 2009

Regularity of participation	Distribution (%)
Regularly	15
Sometimes	36
Seldom	32
Never	17
Number of responses	959

Type of sport that Qatari women ages 15 and older participate in, 2009

Type of activity	Distribution (%)
Walking	58
Running	12
Aerobic exercise	14
Swimming	6
Other	10
Number of responses	959

Factors inhibiting participation of Qatari women

Sociocultural constraints
- Social codes and traditions and family requirements
- Time constraints and family responsibilities

Access constraints
- Availability and appropriateness of facilities and programmes
- Lack of information and guidance

Physiological constraints
- Physical weakness and health status
- Old age

Interpersonal constraints
- Lack of interest and motivation
- Lack of networks and supportive environments

all sectors of the government to work in unison to promote healthy and active living to the public by incorporating sports and physical activity into a broader preventive health agenda. A series of activities will be implemented to champion the many benefits of active lifestyles to individuals, families and communities and to increase sports participation across all age groups and segments of society, including those with special needs. The physical education curricula in schools will be strengthened to improve the learning experience of students and to ensure teacher quality.

More youth programmes to encourage participation in sports

Given that the school community has a unique role in promoting diverse physical activity opportunities for young people, a national sports curriculum project will be implemented to improve the physical education learning experiences of students and to ensure they are receiving proper guidance from well trained teachers. The activities within the project will complement the ongoing efforts by the Supreme Education Council to improve the quality of physical education in schools.

Curriculum guidelines will be developed to integrate co-curricular activities and intended health outcomes and will include suggestions for more effectively managing physical education programmes in schools. Examples could include well-being teams to develop a positive school culture or the appointment of student leaders as sports and recreation coordinators. In addition, guidelines will be created to focus on activities for students with physical or learning disabilities. For teachers, professional development opportunities will be offered to improve skills, and a teacher certification programme will be implemented to ensure that all teachers are properly prepared. In order to review the overall strengths and weaknesses of a school's curricula and to ensure that it aligns with national standards, the government will develop a monitoring and evaluation system. And a review of school sports facilities and equipment will ensure that all schools have the sufficient infrastructure to support physical education needs.

Targets
- Develop curriculum support materials, including physical education guidelines for students with disabilities.

- Ensure that all physical education teachers are certified.

Healthy and active lifestyle interventions

To champion the many benefits of sports and to increase participation across all age groups, a healthy and active lifestyle project will be implemented based on two key components: a sports participation survey and the Active Qatar campaign. The participation survey will collect information on the frequency, duration, nature and type of physical activities that individuals undertake. These data will provide an evidence base on which to develop informed policies that increase community participation in sports and physical activity and that enable the government to set targets for sports participation.

The Active Qatar campaign will be carried out to educate and engage the public on the importance of healthy and active living. Given that participation levels are low across the entire population, the campaign will initially promote active lifestyles for everyone. This first stage will be followed by targeted campaigns for priority groups whose level of activity is very low or who have a higher risk of inactivity-related diseases, such as people with disabilities, women, the elderly and people with clinical conditions such as obesity and diabetes. The design, implementation and evaluation of the Active Qatar campaign, as well as the prioritization of resource allocation, should be guided by and integrated with the participation survey.

Targets

- Collect baseline information on society's sports behaviour.
- Increase participation in sports and physical activity by Qatari men, women and children.

Equipping the country with accessible sports facilities

For people to engage effectively in sports and physical activities, Qatar must ensure adequate access to sports and recreation facilities that provide an enriching learning environment. As sports participation increases, more facilities must be made available so that everyone can easily take part in physical activity, anytime and anywhere.

A national infrastructure-building programme has been in place since 2004 to provide more competition fields, neighbourhood playgrounds and cultural centres. Sports infrastructure owned by the Qatar Olympic Committee and ASPIRE consists of various facilities around the country (table 5.9).

Table 5.9 Sports infrastructure owned by the Qatar Olympic Committee and ASPIRE consists of various facilities around the country

	Total			Total	
Facility	2008	2010	Facility	2008	2010
Sports stadium	10	12	Horse racetrack	1	1
Football playground	71	90	Car racing track	3	3
Swimming pool	18	18	Indoor bicycle track	0	0
Indoor hall	32	35	Equestrian field	4	4
Basketball court	8	9	Shooting gallery	11	11
Volleyball court	8	11	Table tennis hall	20	20
Handball court	11	12	Tennis court	23	23
Billiards hall	11	11	Squash court	21	23
Chess hall	3	3	Hockey field	3	3
Athletic field/track	12	13	Golf course	1	1
Camel racetrack	0	0	Sailing club	1	1

These facilities, except for facilities at schools under the purview of the Supreme Education Council, are open for use by the general public, with various degrees of access, and are occasionally used for multipurpose events, such as concerts and plays.

Countries wishing to develop effective sports infrastructure also face the pressure of finding enough land near residential zones and easily accessible to spectators and athletes alike. This problem is exacerbated in Qatar by its rapid population growth and increasing urbanization. While the country's major sports venues are located in populated areas, restrictions on use and access, as well as incomplete information, are limiting the demand and potential of sports development among the general public. Additionally, urbanization pressures are increasing competition for land and boosting land prices.

The government will equip Qatar with adequate and accessible sports facilities by developing a national sports and recreation facilities master plan to systematically collect and analyse data necessary to develop a network of accessible, high-quality open spaces and recreational facilities.

A cohesive plan for developing sports facilities

A national sports and recreation facilities master plan will be implemented to identify integrated policies for the development and land use in support of sports and active recreation. The government will undertake an audit of current facilities to analyse supply against present and projected future demands. The plan will also include spatial maps to show the locations of current and future sports stadiums and competitive venues as well as dedicated areas for casual recreational activities. Through systematic collection and analysis of data related to existing facilities, the government will create an up to date electronic database of all sports and recreational facilities to better manage work towards end goal—a network of accessible, high-quality open spaces and facilities that meet public needs and are economically and environmentally sustainable. In addition, before deciding on whether to build new facilities, the government will consider sharing existing private facilities and opening school sports facilities to the public at specified times, with caveats on insurance coverage and fees.

Target

- Complete a national sports and recreation facilities master plan, including a database of all sports and recreation facilities in Qatar.

Propelling the country to sporting excellence

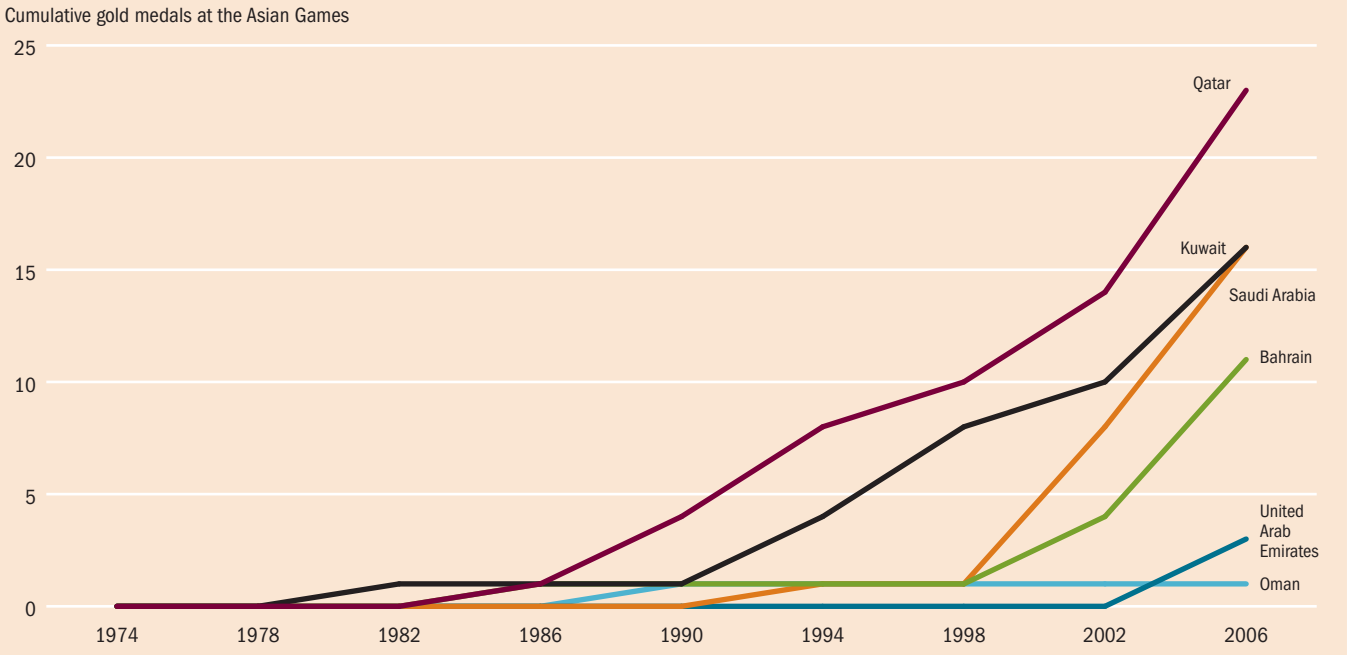
Modern, accessible and appropriate sporting facilities are crucial to the long-term investment Qatar is making in developing a society that is both physically fit and nurturing of elite competitors. Sports excellence is integral for generating interest in sports and building national pride. A key challenge for Qatar is to improve the performance of Qatari sportsmen and sportswomen at regional and international championships. National sporting heroes can inspire Qatari youth to participate in sporting activities and motivate them to adopt a healthy and productive lifestyle in pursuit of their dreams.

In 2006 Qatar hosted the Asian Games, the premier multisport continental-level competition in which Qatar participates. Long before then, however, Qatar's youth had demonstrated their excellence relative to other Gulf countries. While Kuwait was the first Gulf Cooperation Council country to win a gold medal at the 1982 Asian Games, Qatar has proven to be the most consistent and successful (figure 5.19).

Qatar's growth at the Olympic level is further evidence of the country's growth as a global sports competitor. After sending a team of 17 athletes to the 1984 Los Angeles Olympics, Qatar's first, the country boasted a delegation of 31 athletes just eight years later in Barcelona, where it won its first medal. Qatar has since added another Olympic medal, a testament to the improved international standing of Qatari sportsmanship.

A key challenge for sports administrators in Qatar, therefore, is to continue improving the performance of Qatari athletes at regional and international competitions. To meet this goal for the National Development Strategy 2011–2016 and beyond, the government will enhance talent

Figure 5.19 Qatar is the best performer among Gulf Cooperation Council countries in the Asian Games



development for improved sporting success by creating effective development models to nurture athletic growth from the stage of early training to the level of elite competition. In addition, a strategic management plan will be created to support the employment, retention and development of coaches and technical sports officials to better promote the growth of Qatar's sports sector. Besides good athletes, sports development necessitates capacity building of professional coaches and a well organized coaching system (table 5.10).

A comprehensive plan for athletic development

This plan will develop a sound and rigorous process to identify and develop young sporting talent. The Qatar Olympic Committee and its federations and clubs, as well as the Aspire Zone Foundation, will coordinate their talent identification and management processes to ensure a seamless transition between pathways. These agencies will work together to define the development requirements of each categorized sport and to formulate a common set of criteria and protocols that reflect athletic ability among young children. This plan will also benefit from the Qatar Olympic Committee's initiatives in support of a long-term national development model for athletes, as will achieving the committee's priority 4 area on athlete pathways development as stated in its 2008–2012 strategic plan. A central database will be set up to track the performance of the country's sports talents, and all sports federations will be compelled to share and transfer knowledge as necessary for a more efficient use of resources.

The project will also explore athlete development models for women and put in place a structure to take practical steps towards addressing the underrepresentation of women in elite sports. In addition, athletes with disabilities will be provided with appropriate opportunities and access to sporting pathways.

Targets

- Produce an athlete development model, including specific models for women and people with special needs.
- Create a national database of athletes.

A strategic management project to develop professional career paths

A strategic management project will be implemented to identify the systemic resources required to support the employment, retention

Table 5.10 The ratio of registered athletes to coaches has declined in most sports activities

	Athletes		Coaches		Ratio of athletes to coaches	
Sport	2003	2008	2003	2008	2003	2008
Athletics	1,182	1,208	21	16	56	76
Basketball	685	747	25	45	27	17
Billiards and snooker	142	305	5	8	28	38
Bowling	163	251	6	8	27	31
Fencing	100	208	4	20	25	10
Football	3,255	3,960	182	217	18	18
Gymnastics	158	137	6	14	26	10
Handball	1,313	1,692	36	80	36	21
Martial arts	209	1,763	8	71	26	25
Shooting	125	151	11	16	11	9
Swimming	136	310	13	29	10	11
Table tennis	364	400	13	18	28	22
Tennis and squash	96	297	25	29	4	10
Volleyball	745	1,235	26	60	29	21

and development of coaches and technical sports human resources, while increasing the overall knowledge base and capacity of all sports development officials.

A benchmarking exercise will determine international best practices for optimum coaching ratios, while gaps in the country's current athlete management practices will be identified.

Target

- Develop a strategic plan for coaches and technical human resources.

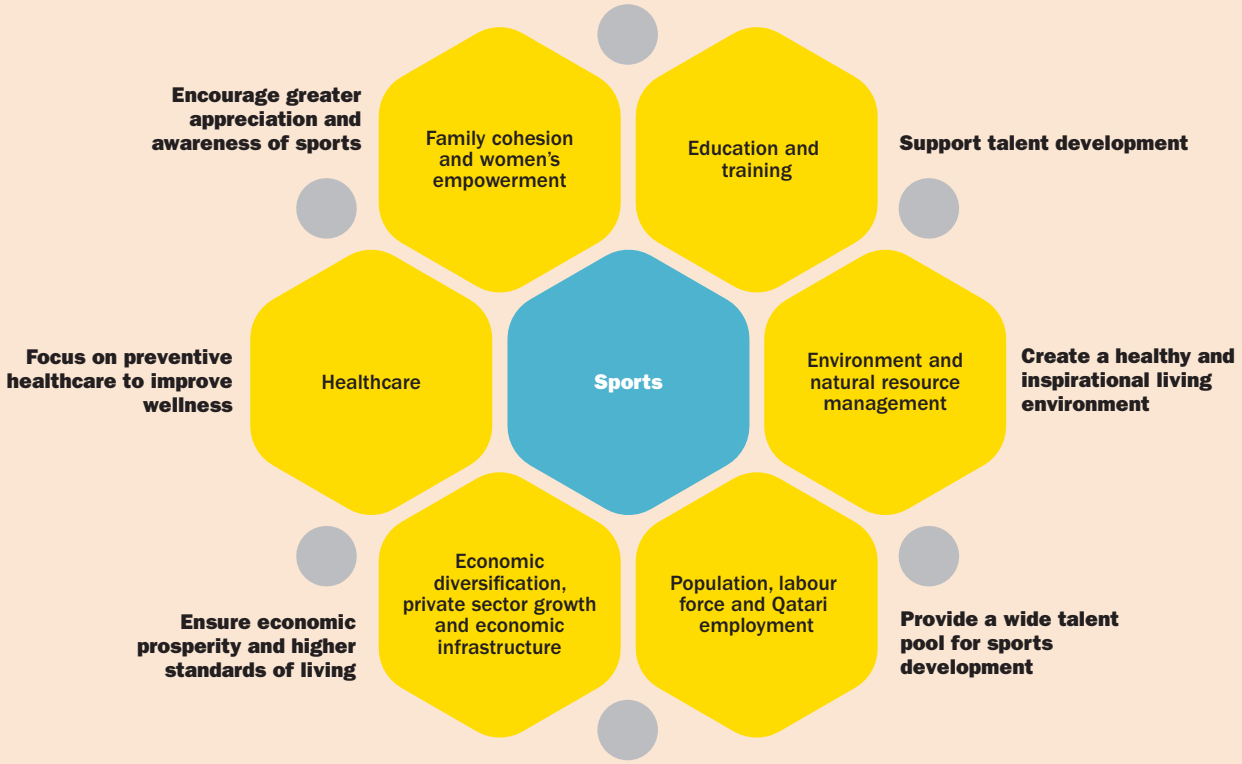
Fostering cross-sectoral links

The Qatar Olympic Committee's experience in engaging multiple stakeholders in its work is evidence of the importance of cross-sectoral links in sports. Much can be leveraged from the partnerships that have been formed between the committee and other entities, including both the public and private sectors. At the community level sports helps build social and family cohesion by bringing people together in a friendly and active way. At the individual level participation in sports raises people's confidence and skills and improves physical health and mental well-being. These personal benefits contribute towards broader national outcomes, including a healthier and more physically fit society with lower healthcare costs and a stronger, more productive labour force. Quality sports facilities and services, including outdoor recreation facilities, also make Qatar a more attractive place to work, live and visit. At the international level, sports events and athletes help raise Qatar's regional and global profile and enhance national pride. Sports is also a powerful tool for international engagement and diplomacy through tourism, aid and trade.

A sporting culture cannot take root overnight. The sports sector of the National Development Strategy 2011–2016 will be key in meeting the goals of the social development pillar by enhancing Qatar's sound social structure and by generating momentum for a future whereby people will embrace sports as a way of life. But given the influence that active lifestyle initiatives can also have on economic, environmental and human development policies, several cross-sectoral links can be identified that demonstrate how sports is both a goal of, and an enabler of, *QNV 2030* (figure 5.20).

Figure 5.20 Sports is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for sports



Sports as an enabler for other sectors

Cultural growth for a creative and exceptional society

The state of Qatar will "preserve national heritage and enhance Arab and Islamic values and identity".—Qatar National Vision 2030

Across the world countries are attempting to reconcile the forces of globalization and the preservation of national culture. While the increasing influence of popular culture in societies is inevitable, some features of national culture will persist, despite global pressures, because of their unique ability to provide a meaningful sense of national identity. As Qatar works towards achieving *QNV 2030* aspirations, finding the right balance between modernizing and preserving the country's culture and Arab identity is a sizeable challenge.

Qatari society has undergone a rapid change in a relatively short period of time. The transformation from natural pearl production to the global fossil fuel industry has affected almost all aspects of everyday life, from family life to the national workforce and to Qatar's enhanced status among the international community. In some way all components of the social development sector of the National Development Strategy 2011–2016 reflect actions necessary to strengthen Qatari society as a result of this unprecedented socioeconomic transformation. New developments in communication, transportation and technology are creating new forms of cultural production, allowing for higher flows of cultural products into and out of Qatar. Qatar's huge expatriate population represents a variety of cultures and includes practitioners of many other religions. This shift, which has taken place in a single generation, has resulted in the need for an active policy on cultural diversity.

Despite the many changes, Qatari society has maintained the essence of its culture and a considerable degree of continuity from the past. This continuity includes observing the fundamental principles of Islam, maintaining the inherited status and prestige of the leading families and preserving the connectedness of family affinities. The primary, persistent challenge is to maintain this balance between modern life and the country's cultural and traditional values.

Qatar is meeting this challenge in many ways, through cultural programme exchanges, international film festivals, athletic competitions, enriched academic curricula targeting artistic development and more. The Doha Capital of Arab Culture 2010 is a successful, year-long event celebrating the arts, music and film through conferences, cultural summits and mutual knowledge-sharing. Additionally, Qatar is increasing attention to its own history through enhanced preservation practices. By thoroughly embracing its cultural identity in the context of its increasingly diverse population, Qatar will be well positioned to protect its unique character while continuing to foster a creative and exceptional society.

However, a country's culture should be assessed not only on its artistic achievements but also on how much it contributes to the social structure. The culture sector of the social development pillar, therefore, plays a key role in enhancing and improving the quality of life and well-being of all citizens, particularly in fostering creativity and promoting cultural activities around the world. Qatar will enable the cultural growth of its people, forge new international relationships and meet the obligations of *QNV 2030* through six overarching outcomes and seven priority projects in which the government will:

- Use culture as a platform for building national pride and encouraging intercultural understanding.
- Safeguard and develop Qatar's cultural heritage to preserve its national identity and strengthen family cohesion.
- Use culture to enhance young people's learning, build their self-esteem and help them realize their full potential.
- Attract and nurture high-quality talent to inspire and stimulate the growth of the culture sector.
- Encourage greater interest in culture by providing research and information on the growth

and potential of the culture sector, as well as the benefits of being involved.
- Raise Qatar's profile and standing as a lively cultural destination and a centre for cultural exchange.

Achieving these outcomes will enhance the cultural well-being of all citizens and solidify Qatar's standing as a centre of Arab culture through its distinctive national identity.

Increasing demand and support for diverse cultural activities

Although Qatar's rapid modernization has resulted in a certain amount of Westernization, distinctive elements of traditional culture remain, particularly in music, poetry, dance and storytelling. Across the country, different agencies, including grassroots and community-based groups, are promoting Qatari culture, as well as foreign cultures, encouraging cultural exchange and intercultural dialogue. This outreach has enabled Qatar to raise its sphere of influence worldwide. But to maximize impact, these various activities need to be enhanced, integrated and promoted within a national framework, which will be used as a platform for building national pride and encouraging intercultural understanding.

The government will increase demand and support for diverse cultural activities by establishing a grant programme to support cultural projects (such as festivals, exhibitions, tours, workshops and conferences), cultural organizations and artist development, and cultural research to collect and disseminate information that promotes the exchange of experiences and best practices. Concurrently, Qatari media, which is important in shaping policies and identity, will take a larger role in promoting cultural objectives.

The programme to increase demand and support for diverse cultural activities will provide opportunities for the country to develop the cultural and innovative capabilities of young people and children, will encourage the elderly and vulnerable people (such as people with disabilities) to increase their participation in cultural activities and will enhance the values of gender equality. It will also increase the knowledge base on the impact of foreign cultures and its link to societal changes, especially on the Qatari family.

Rich cultural programmes to engage the community

A cultural grants initiative will encourage development in Qatar by providing support for:
- Cultural projects, including a wide range of activities such as festivals, exhibitions, new productions, translations, tours, workshops and conferences.
- Cultural organizations and artist development.
- Cultural research and development, which will include support for studies and analyses on cultural cooperation and cultural policy development, as well as the collection and dissemination of information that promotes the exchange of best practices.

The project will use an interdisciplinary approach, involving key culture stakeholders in a collaborative, participatory process. The grants will be targeted to artists and institutions but will be available to a broader audience, particularly young people, women and the socially disadvantaged. Grants will be implemented on a yearly basis, and each cycle will carry a different theme to inspire thought on specific social causes or issues ("Culture and the family," "Culture and women" and the like).

An information technology platform will be built to support implementation and administration (for collecting data, allowing applications to be submitted online and promoting programmes), and the entire project will be supported by a communications plan that will include annual reports. The grants programme will be managed by a multisectoral committee chaired by the Ministry of Culture, Arts and Heritage and will include representatives from throughout Qatar's cultural leadership community. The committee will develop and oversee all details relating to administration of the project. For greater transparency and

accountability, the grants programme should be audited by an independent third party.

Target

- Launch a culture grants programme supporting at least 15 initiatives.

Media resources as instruments of cultural promotion

As part of a new culture and media project, the government will encourage ongoing engagement between the culture sector and the media for the mutually beneficial outcome of greater cultural awareness throughout society. The culture sector will be more proactive by formulating unique media strategies for different cultural events, by developing a more systematic method of communication through press releases and news conferences and by embracing and adapting to new media technologies. The media will be more proactive by undergoing training for reporting on cultural issues so that reporters, producers and other media professionals will become better educated partners in cultural development. Training will be extended to include effective use of new media platforms, such as Facebook and Twitter, in an effort to better reach Qatari youth.

The training activities and enhanced collaborative partnerships should lead to jointly created content that promotes Qatar's culture, such as special features on unique cultural activities like Qatar National Day or the Eid celebrations, as well as regular columns or documentaries in newspapers, magazines and online media formats. In addition, the website for the Ministry of Culture, Arts and Heritage will be upgraded to better serve as an interactive platform for education and promotion. The new website will emphasize information sharing and collaboration in keeping with modern technology trends.

Target

- Implement at least five culture-related projects with media partners.

Improving management of heritage resources

Throughout Qatar's recent socioeconomic transformation, the country's cultural heritage has increasingly been seen as an important stabilizing force, representing a common bond among citizens and acting as a counterbalance to rapid social change. Heritage is an irreplaceable resource, so cultural resources must be safeguarded for future generations.

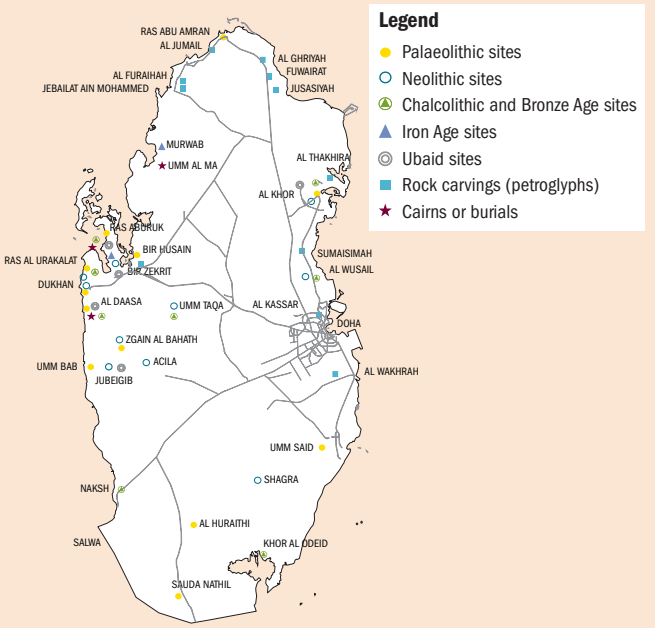
Currently, Qatar's laws and regulations do not effectively support cultural preservation, nor is the tourism and educational potential of archaeological and heritage sites optimized. Most of the more than 200 estimated archaeological sites in Qatar have not been legally registered to guarantee preservation of their antiquities. Meanwhile, Qatar's heritage sites date from the 17th century and consist of ruins of small villages, forts, palaces, houses, castles and towers. Many of these sites are deteriorating and in need of repair.

Under the guidance of the Qatar Museums Authority, established in 2005, the country has opened numerous museums to display artwork and artefacts, with at least eight more being planned. Still, the need for a more dedicated and integrated management process is apparent to meet the goals of *QNV 2030*. To safeguard Qatar's cultural identity, the government will improve management of heritage resources through enhanced laws and regulations to better preserve the country's archaeological past and through a programme to develop the tourism and educational potential of Qatar's many archaeological and heritage sites (figure 5.21).

A governance system for heritage resources

A cultural heritage governance project will be implemented to review and update laws and regulations that affect cultural preservation and archaeological heritage. This process will include measures to regulate site safety, property removal, building permit processes and ownership of

Figure 5.21 There are about 200 archaeological sites across Qatar, with more than 900 varieties of petroglyphs



Years	Archaeological period	Major sites
Earliest times to 8000 BCE	Paleolithic	Dukhan, Al Khor
8000 BCE	Early Neolithic	Al Wakra, Al Jubeigib, Dukhan
5000 BCE	Late Neolithic	Al Jubeigib; Shagra B, C and D; Al Khor
2000 BCE	Bronze Age	Al Da'asa, Ras Abaruk
1000 BCE	Iron Age	Murwab, Ras Abaruk

heritage buildings. At the same time, the government will seek to expand tourism and educational opportunities of historical sites by developing a strategic promotional plan, beginning with enhanced international recognition through inclusion on the United Nations Educational, Scientific and Cultural Organization's World Heritage list.

In addition to site preservation, the government will seek to manage and maintain Qatar's cultural heritage in other ways. The country's Cultural Development Centre will complete a digitization project in which hundreds of books, maps and manuscripts of great value to the Arab world will be made available through an online repository. The centre is also developing an Arab and Islamic heritage library with rare collections that exhibit the depth and wealth of the Arab and Islamic civilizations. And as part of the Qatar National Museum Project, the museums authority will organize an oral history programme.

Targets

- Review and update relevant laws and regulations on cultural preservation and archaeological heritage.
- Establish at least one archaeological site.

Investing in young people

Just as preserving the past is an integral component of a society's cultural awareness, so too is cultivating a dynamic artistic future. The government can lay the groundwork for a more robust national programme, but real cultural sustainability will be achieved only through intergenerational awareness. Qatar's youth are key stakeholders in cultural development, because they are the current and future consumers and creators of culture.

As Qatar diversifies its economy, there is an increasing emphasis, especially in higher education, on subjects that propel a knowledge economy, such as math and science. However, there is great value for an equal emphasis to be placed on subjects such as culture and arts. The National Development Strategy 2011–2016 will ensure that Qatar's youth are educated to appreciate aesthetics and to take an interest in their cultural heritage, leading to more interesting learning experiences and more opportunities for creative development at a young age.

Programmes to enhance youth participation in culture

A culture and youth project will enhance learning opportunities for Qatari children by promoting young people's understanding and appreciation for culture at all levels, especially in enhancing national, Arabic and Islamic identity among young people. It will also foster their creativity and imagination from an early age into adulthood, nurturing well balanced young talents with inquisitive, analytical and creative mindsets, strong communications skills and a strong grounding in culture.

Qatar's cultural leadership groups will strengthen their own partnerships to improve the teaching of culture in schools and to leverage the country's many cultural and heritage sites into enhanced learning experiences.

A visual arts and design high school will be established with a focus on developing skills, improving techniques and enhancing creativity. The school will give students practical exposure to the arts and design industry and include elective subjects such as film, photography, digital media, design and technology. Together with the Virginia Commonwealth University in Qatar, which provides tertiary arts education, the establishment of this school will ensure that a culture and arts education is systematically and comprehensively promoted in the country.

Targets

- Develop pilot programmes in experimental learning opportunities in culture in at least five schools.
- Establish a visual arts and design high school with an enrolment of at least 50 students.

Developing high-quality artistic talent

By reaching the country's children at an early age, the government will be taking the first, crucial steps in cultivating a dynamic, sustainable artistic foundation for the future. Qatar foresees a vibrant community of artists living and working locally, but a thriving culture sector needs to be supported by a highly qualified talent pool, and there are several aspects of the arts workforce that present challenges to professional development, such as limited opportunities for specialized training and negative public perception on the value of an arts career.

While Qatar has the capacity to build the necessary infrastructure to support artist development efforts, an immediate challenge is how to generate sufficient interest in the sector to address the shortfall in promising creative careers. The Ministry of Culture, Arts and Heritage is trying to develop and promote Qatari theatre, but the local scene is being held back by limited opportunities for artists to pursue specialized training, limited venues for practice and staging and a lack of playwrights, directors and producers. Through the National Development Strategy 2011–2016 the government will develop high-quality artistic talent to inspire and stimulate growth by expanding its knowledge base on the arts industry and by implementing a comprehensive artist development project to create a more enabling environment for aspiring artists.

A framework for artist development

A comprehensive artist development project will be implemented to strengthen professional capabilities in theatre. Experiences from this project will be adapted and applied in the context of other art forms, such as music, film, dance and others. The project will focus on three primary goals—developing a dynamic and collaborative community of theatre artists, generating greater interest in theatre and the arts overall and creating a supportive environment to ensure an individual's full artistic potential is reached. A capability development programme will be established to take artists from one phase of growth to the next.

A baseline study will be conducted to better understand the key players in the theatre industry, the level of support currently provided to theatre

groups and artists, and the venues and facilities available for practice and staging. The capability development programme will build on this baseline study to provide Qatar a roadmap for discovering and grooming talent, enhancing professional competencies and recognizing achievements through awards and special functions. Designing a comprehensive artist development programme will take time, so the government will implement various "quick-win" initiatives to begin generating interest and momentum for the overall programme.

Targets

- Develop a better understanding of the theatre scene through a baseline study, and create a capability development programme for artists.
- Implement at least two "quick-win" initiatives for artist development.

Providing better information for cultural advocacy

As Qatar looks to further develop its own artistic talent pool, the country is cultivating its reputation as a leader in international Arab culture by hosting such high-profile and influential events as the Doha Tribeca Film Festival and the Doha Capital of Arab Culture 2010. Qatar has also invested heavily in developing its cultural sector through the establishment of the Museum of Islamic Arts, the Cultural Village and the Qatar Philharmonic Orchestra. While these attractions obviously enhance Qatar's cultural cachet, their impact on the country's social and economic outcomes is unclear due to fragmented and incomplete information, making it difficult to form a coherent national picture of cultural activity. Since cultural data and information are required to support policy planning and development, there is an urgent need to improve information and communications on cultural activities in Qatar. To close this knowledge gap, the government will provide better information for cultural advocacy by developing a cultural statistics framework to enhance the range and quality of data available.

Better information and communications on culture

Developing a comprehensive cultural statistics framework will be the first step in a long-term cultural information project process intended to improve the quality and range of statistical data on Qatar's cultural sector. The development of the framework will involve considerations of such issues as a working definition for culture, the classification of cultural activities, measurements of the economic and social dimensions of culture and data collection processes. Once the framework is established, a regular publication on Qatar's cultural statistics will be produced, giving a more holistic picture of the country's culture scene. An additional source of information sharing will be the upgraded Ministry of Culture, Arts and Heritage website, identified as part of the Culture and the Media Project. The redeveloped website will serve as an interactive portal for dissemination and discussion of the country's cultural information.

Targets

- Improve the framework for measuring the level of cultural activity in Qatar, including producing a publication with key cultural statistics and indicators.
- Improve communications on cultural activities through an upgraded Ministry of Culture, Arts and Heritage website.

Strengthening Qatar's cultural diplomacy

Qatar has invested heavily in developing homegrown cultural initiatives and in attracting international institutions and events to the country. Examples include expansion of the Al Jazeera broadcasting network; dynamic bids to host the Olympic Games and the World Cup; international sporting events in golf, tennis, squash, cycling, gymnastics and motor sports; and the higher learning institutions of Education City, which have attracted students from numerous countries.

At the regional and international level Qatar plays a key role in promoting dialogue and religious

tolerance through various regional and international initiatives, such as the annual U.S.-Islamic World Forum, which is hosted in partnership with the Brookings Institution to strengthen relationships between the United States and the Islamic world. The country also hosts the annual Doha Interfaith Conference to encourage constructive dialogue between religions for greater mutual respect and cooperation. *QNV 2030* foresees Qatar playing an increased regional and international role economically, politically and culturally, particularly within the framework of the Gulf Cooperation Council, the Arab League and the Organization of Islamic Conferences.

An intensification of cultural exchange with the Arab community and with other countries in general will create a positive image for Qatar and enhance international relations, so the government will improve branding of the country's global image, using cultural exchange programmes and regional arts initiatives to promote Qatar's culture. In addition, continuing to attract key international cultural events and showcases to Doha will reinforce Qatar's image as a cultural hub and better position the country to assume a larger leadership role within global society.

Regional and international cultural exchange activities

A Qatar global branding project will be implemented to improve the visibility of Qatar's culture sector through international showcases that allow local artistic talents to become cultural ambassadors for Qatar. Through other cultural sector projects under the National Development Strategy 2011–2016, support will be given to artists and arts group to enable them to participate in prestigious events and to collaborate with foreign arts groups and artists. Not only will artists' audiences be broadened, but artists' work will help reinforce Qatar's image as a cultural hub. To further the cause of extending Qatar's image, the government will also:

- Develop distinctive cultural content.
- Invest in the necessary supportive infrastructure.
- Create a rich calendar of cultural activities.
- Implement an innovative and creative marketing and promotions campaign.

Following this blueprint will allow Qatar to continue to attract key international cultural events, symposiums and conference to Doha, providing the country with a platform for its activities and attract visitors who view Qatar as a cultural destination.

Target

- Improve the country's national image regionally and globally to strengthen Qatar's position as a cultural hub.

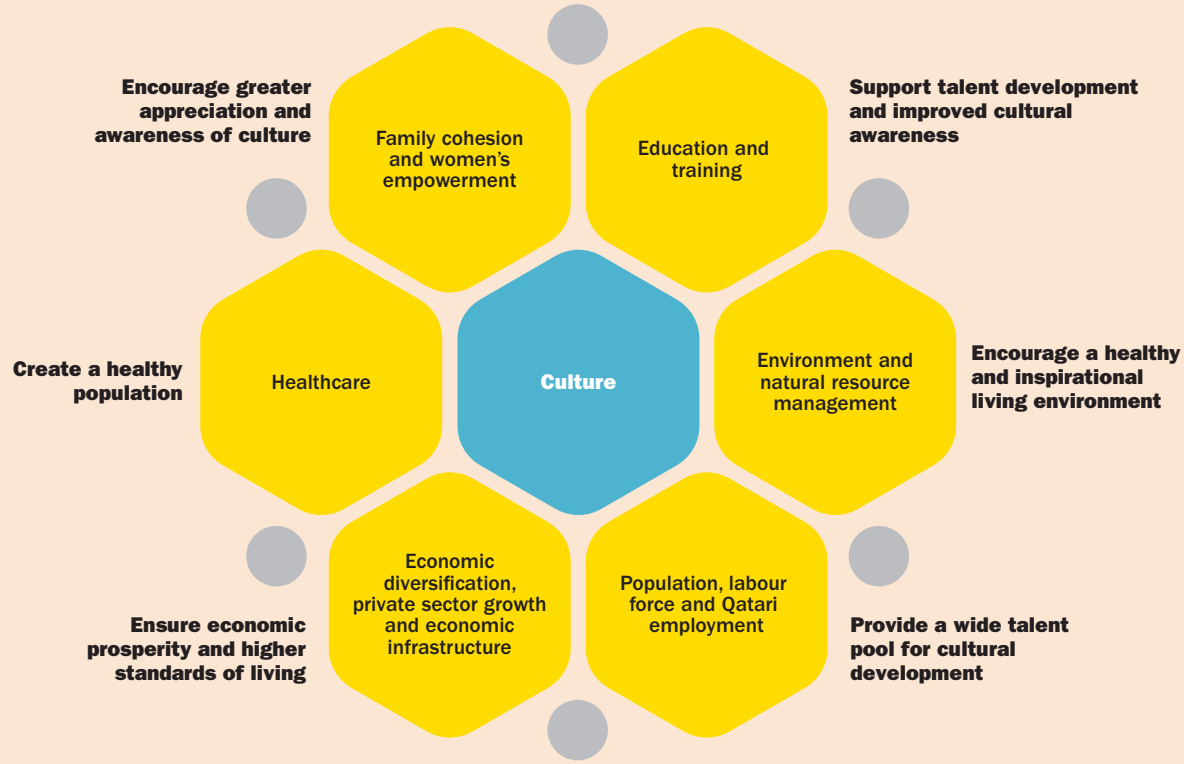
Fostering cross-sectoral links

As Qatar and its people become more global in their outlook, the need to develop a stronger sense of national identity will intensify. Culture, arts and heritage are a common bond that will promote stronger social cohesion and a greater sense of individual contribution to the growth of society. Perhaps in no other area of government is the need to properly balance modernization with the preservation of traditions so great, yet the challenge of finding that balance is consistently present across all sectors of social development strategy.

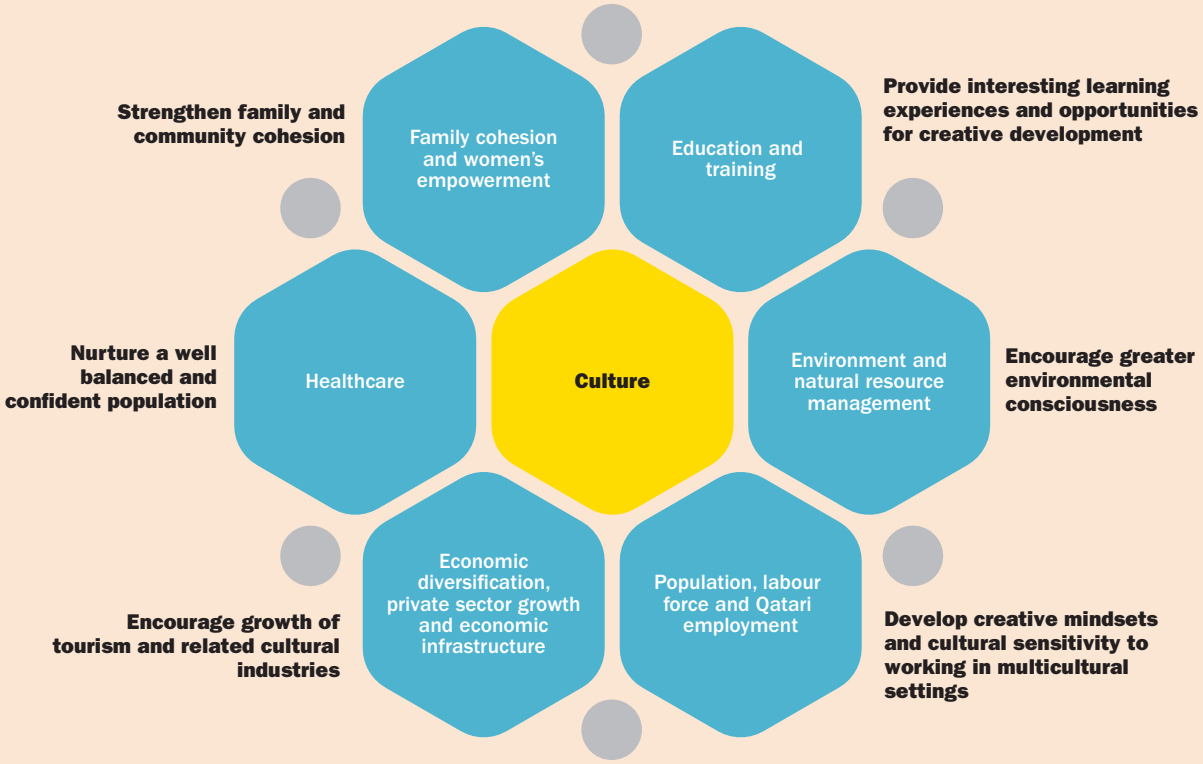
A vibrant community culture is fundamental to the well-being of society and critical to the continuation of a healthy societal value system. The culture sector of the National Development Strategy 2011–2016, therefore, will play a key role in meeting the goals of the social development pillar by preserving Qatar's national heritage and enhancing the Arab and Islamic values on which Qatar's social structure is based. But given the influence that cultural enhancement initiatives can also have on economic, environmental and human development policies, several cross-sectoral links can be identified that demonstrate how culture is both a goal of, and an enabler of, *QNV 2030* (figure 5.22).

Figure 5.22 Culture is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for culture



Culture as an enabler for other sectors



Moving social development forward

One of the key challenges of *QNV 2030* is balancing preservation of traditions and modernization. With Qatar developing at an unprecedented speed and becoming ever more globalized, the tension of balancing these opposing elements intensifies. Greater freedoms, more choices and increased wealth from economic and social progress are challenging the deep-rooted social values highly cherished by Qatari society, creating stresses and strains. Nowhere are these pressures felt more broadly than in the social development pillar, as literally every segment of society and every age group—regardless of gender, race, wealth or occupation—will be affected by the direction and effective management of social policy. To reach the goal of a caring and cohesive society, Qatar will need to be diligent, comprehensive and inclusive in its implementation of the social development plans laid out here.

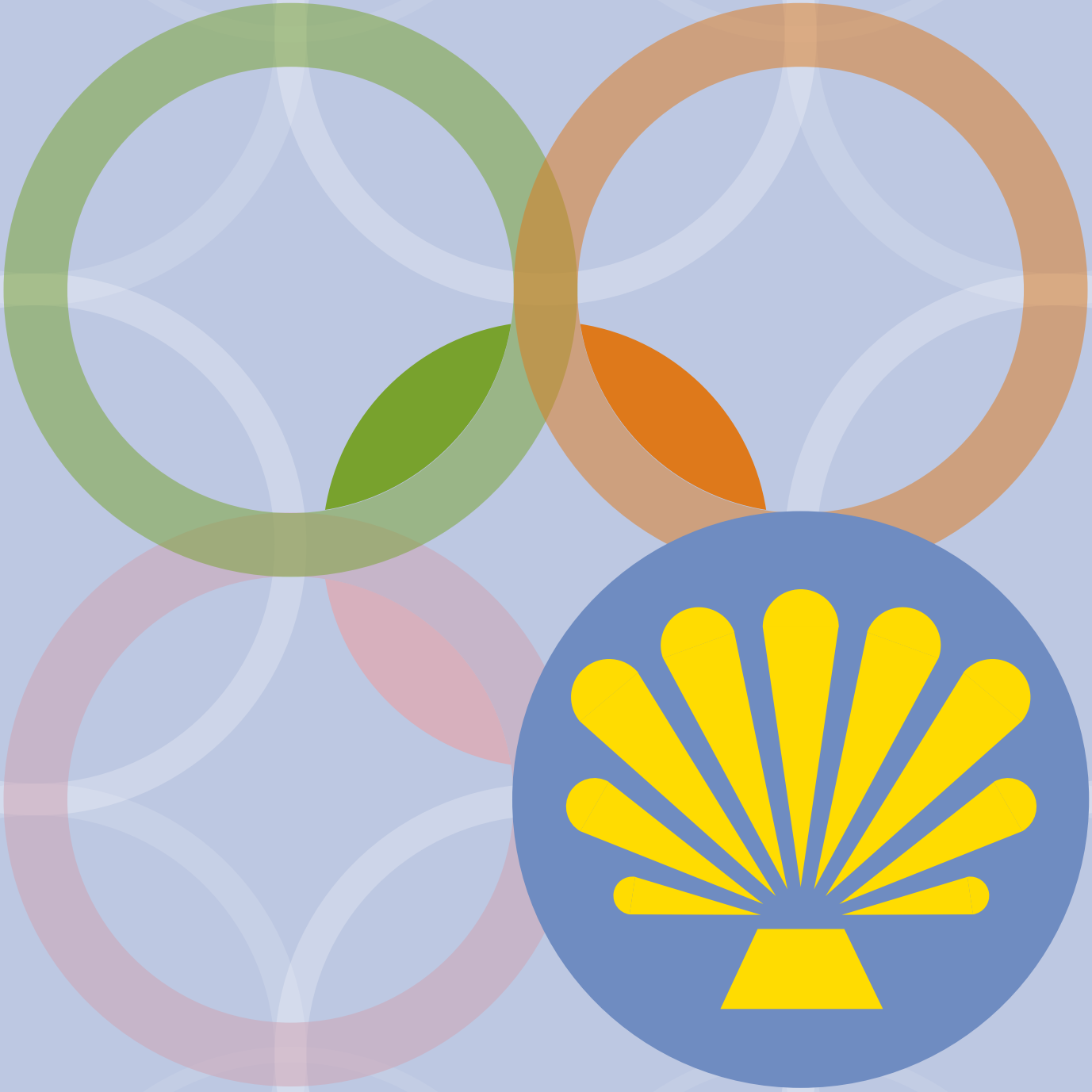
Integrating the policies of multiple, interrelated sectors into one framework will benefit Qatar in many ways as it pursues a progressive social agenda in a highly traditional society. This approach will ensure that careful consideration and proper respect is given to traditional values and cultural sensitivities, even as necessary advancements are made in social equality, protection and justice. Qatar's families, for instance, must remain strong and cohesive and provide a supportive environment for all members. At the same, however, women must be given more opportunity to contribute to the economic and cultural world at large without diminishing their role within the family structure. Children must be guaranteed a nurturing family life with close parental ties but also broad opportunities for social development through increased exposure to the arts, culture and active lifestyles. Just as all elements of a family must work together to build a solid and stable household, all elements of a social structure must work together to build a solid and stable society.

The objectives for a forward-looking integrated social development policy will be achieved only through careful, cross-sectoral strategies with the human development, economic and environmental pillars. Enhanced labour opportunities for all citizens will contribute to a more just and equitable society, in addition to a stronger national economy. Active participation in exercise and sports programmes will lead to healthier children and adults. More advanced building and occupational safety regulations will contribute to better human development through improved health and safety, land management and environmental practices. As Qatar continues to grow and change culturally and economically, integrating social development practices ever more closely with all government policies will lead to stronger and more sustainable outcomes.

The individual sector strategies that together create a cohesive and integrated social development strategy are separate in name and designation only. The National Development Strategy 2011–2016 offers a golden opportunity for all stakeholders in Qatar's social sector to raise the level of cooperation and integrated teamwork to even greater heights in order to ensure maximum benefits on the government's investment in Qatar's current and future social structure.

Chapter 6

Sustaining the enviroment for future generations



6 Sustaining the environment for future generations

Qatar's natural resource endowment creates a unique mix of benefits and stresses. Significant wealth in hydrocarbons has generated one of the world's highest per capita incomes, but extreme scarcity in water and arable land has created equally unusual vulnerabilities and deficits. The government's first National Development Strategy sets out a plan for 2011–2016 that balances economic growth and environmental protection. The overarching goal is a sustainable framework that assures future generations' prosperity but with a quality of life unconstrained by shortages or inherited ecological damage.

Managing resources and protecting opportunity for future generations

The dichotomy of wealth and scarcity plays out at all levels of Qatar's economy and ecology. Between 2004 and 2009 the economy grew in real terms at a record average of 17.1% annually, raising individual incomes to the highest level in the world. Steady investments have established Qatar as the world's largest exporter of liquefied natural gas and a major force in global energy markets. Development of petrochemicals and metallurgy, combined with entry into new sectors such as financial services, has moved the country towards economic diversification. Meanwhile, Qatar has used the significant returns on its hydrocarbon sector to invest in its people through programmes in health, education, social protection and infrastructure (see chapters 3 and 4).

The National Development Strategy 2011–2016 calls for continued diversification and an expanded productive base, along with forward-looking management of environmental challenges. As in any fast-growing economy, economic activity introduces certain stresses into the surrounding environmental and social systems. A surging economy and rapid urbanization have gone hand in hand with a four-fold increase in population since 1990. The increasingly affluent and growing population, 1.7 million in mid-2010, has raised demands on scarce water resources, heightened land-use pressure, increased automobile traffic and generated tons of household and industrial waste each day.

Environmental points of stress

Key environmental stress points include:

- A rising water table in Doha, which is raising construction costs, multiplying the city's environmental challenges and threatening marine life.
- Increasing salinity in groundwater sources for agriculture, which has degraded soil quality. This rise has lowered farm productivity, which is already poor as a result of local farming methods, inappropriate mixes of crops and livestock, and government subsidies.
- Declining air quality, which results from chronically high levels of dust mixing with chemical pollutants. Air pollution contributes to high rates of asthma and respiratory illnesses.
- Climate change, which presents special challenges. As a major energy producer, Qatar's

carbon dioxide emissions contribute to greenhouse gases. As a small coastal country, Qatar is vulnerable to predicted rising sea levels.
- Threats to biodiversity, which have left 31 identified species vulnerable to extinction.

A forward-looking vision, new commitments

The National Development Strategy 2011–2016 for the first time explicitly aligns the growth of national prosperity to the realities of environmental constraints. The strategy for improved environmental management draws on extensive consultations carried out throughout society, including interviews with individuals from government, industry, nongovernmental organizations and academia. The strategy also incorporates the spirit of *Qatar National Vision 2030 (QNV 2030),* which warns that overly aggressive economic development could result in many negative risks, including harm to the environment.

By establishing a programme of strengthened environmental management across economic and natural resource sectors, the government strategy sets out a framework for continued economic growth that avoids penalizing future generations. Advancing specific actions to conserve water, manage waste and discharge, improve air quality and protect biodiversity, the strategy adheres to the foundational concept of intergenerational justice. This calls for "a process that seeks to meet the needs of the present generation without compromising the ability of future generations to meet their needs."

The forward-looking strategy, a "bridge to the future," lifts environmental concerns to a new level, within a balanced programme of economic growth, social development and environmental management. While investing in sources of future prosperity, the government will adopt and adapt the most effective policies and technologies for protecting environmental assets and reducing pollution.

To ensure continuing progress in environmental management, the government will take steps to mobilize all citizens. Public awareness-building will educate the population on the need for sustainable development. The government also recognizes the imperative of cultivating a sense of environmental responsibility within industry, while building a legal system and effective institutions that support environmental protection over time.

The transition to sustainable environmental management will involve shifts at all levels. Many existing national structures, institutions and practices are not oriented to take into account the needs of future generations or to balance the sometimes conflicting priorities of economic expansion and environmental protection.

The new framework—with intergenerational equity at the centre—is a balanced programme of economic growth and environmental protection in which neither drives out the other. To avoid or minimize harmful consequences for the environment, *QNV 2030* calls for economic growth "at a pace that is consistent with the realistic expectations of sustainable improvements in livelihoods and in the quality of life."

Systemic changes

Qatar's strategy for environmental management calls for 11 interrelated actions that cut across all areas of environmental management. Setting specific targets to be achieved by 2016, the strategy establishes a comprehensive programme to preserve the quality of life for future generations. Water will be better conserved and protected from degradation. Expanded recycling will greatly improve solid waste management. Careful monitoring and regulation will protect vulnerable species and broadly preserve Qatar's natural heritage. Urban spaces, subject to intense construction over the past decade, will be healthier and more liveable as green spaces are added.

The government's ambitious agenda will require organizational changes and substantial capacity-strengthening within institutions responsible for the environment. Although many parts of government and the private sector will be involved, the Ministry of Environment will assume the lead.

Its expanded responsibilities will require recruitment of scientists and technical specialists to oversee research, monitoring systems and regulation. In addition, the ministry will need to collaborate closely with other government units.

Qatar's emerging commitment to environmental protection will require a virtual revolution in information and data-gathering systems. In mandating new standards for water, solid waste, airborne pollutants and biodiversity, the government is taking stock of present conditions while defining realistic improvements for the next six years. However, decision-makers need more information on groundwater levels, biodiversity and the health effects of air pollution—to cite just three areas where information gaps pose a challenge for assessing present and future risks and designing solutions. Similarly, individual challenges—such as Doha's rising water table—will require that officials first gather key information and then fashion a plan for reversing harmful trends.

For example, coordination with health experts will be critical to assess the precise health effects of local air pollution, which require more study.

Appeal to long-held values

The government has anchored the plan for environmental protection in the core value of intergenerational justice, recognizing that depleting finite resources without creating new resources of renewable wealth jeopardizes the rights of future generations.

Respect for the needs of future generations is a basic religious and moral value among Qataris. In the same spirit as equipping the next generation with skills for future prosperity, the environmental management strategy seeks to spare future generations an unwanted legacy of contamination and scarcity.

Qatar's strong financial position, supported by a hydrocarbon-based income stream anticipated to last another century, positions the government to make the extensive investments needed to achieve the strategy's goals. Other countries might hold the same aspiration of ensuring high quality of life for future generations but lack the resources to build an integrated platform for sustainable development. Qatar's abundant hydrocarbon resources can be leveraged to make sustainable development a reality.

Realizing *Qatar National Vision 2030* for sustainability

Interventions to be initiated between 2011 and 2016 will put Qatar on a path of environmentally sustainable development. Many of the changes call for new patterns in consumption and production, complemented by lasting improvements in environmental governance and performance. The environmental management strategy envisions a broad shift in laws, regulation, management systems, technologies and attitudes (see chapter 3 for the proposed economic measures).

Expertise from around the world will be tapped to ensure that the government has access to the most promising ideas and innovations. In time, Qatar will emerge a regional or global leader in environmental technologies and applications.

The strategy for improved environmental management involves working towards seven outcomes:

- Cleaner water and sustainable use.
- Cleaner air and effective climate change responses.
- Reduced waste, more recycling and more efficient use.
- Nature and natural heritage conserved, protected and sustainably managed.
- More sustainable urbanization and a healthier living environment.
- An increasingly environmentally aware population.
- Improved governance and regional and international cooperation.

In each area the government has established measurable targets to be attained by 2016. Five of the seven outcome areas involve tangible components of the physical environment: the water we depend on for all human activity, the air we breathe, the waste we must dispose of or reuse, the urban

setting where most of the population lives and works and the natural heritage we hope to protect.

Many outcomes in these five areas involve observable changes. For example, water leaks will be sealed, gas flaring will be reduced and a robust recycling industry will cut the volume of waste deposited in landfills. Changes in the other two areas—involving awareness and governance—are less readily measured but are critical to achieving the more tangible shifts. For example, building an environmentally aware population will be crucial to advancing conservation, and improved governance will be necessary in designing and enforcing new environmental regulations.

Cleaner water and sustainable use

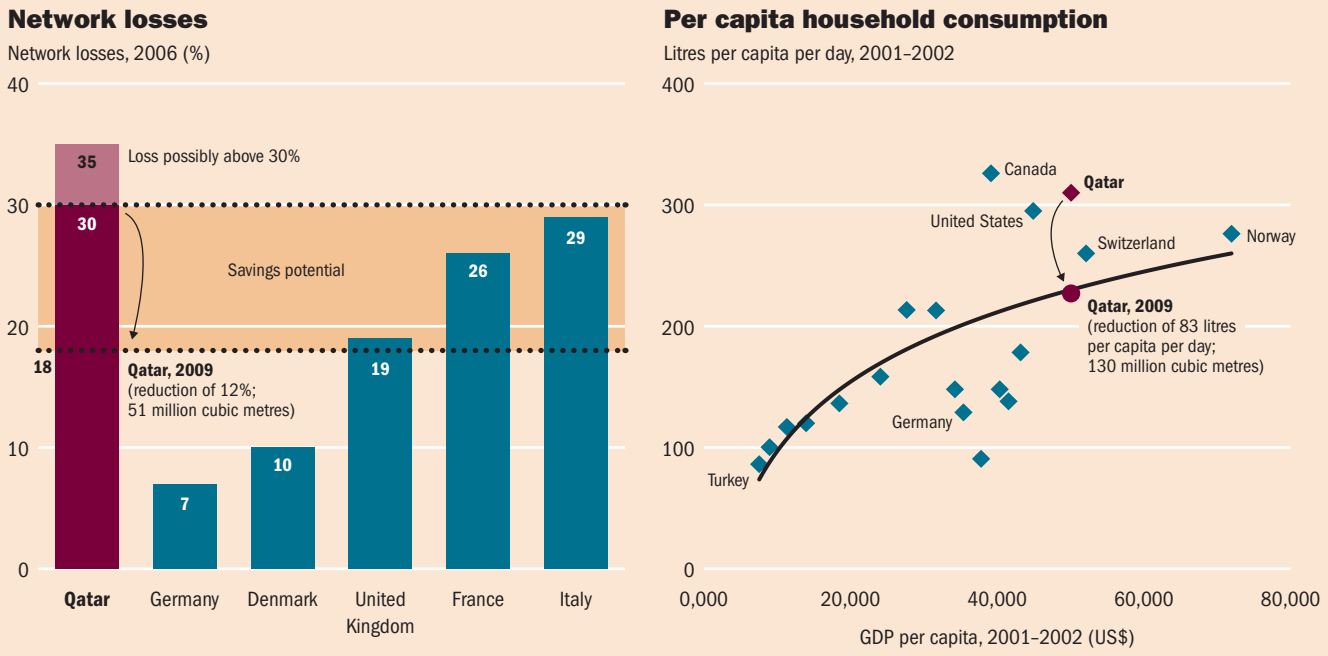
Among the various environmental concerns facing Qatar, the most pressing is linked to the country's most acute scarcity—that of water (see chapter 3).

With one of the world's lowest levels of rainfall, Qatar relies on water from three sources: desalination, groundwater and recycled water, and all three face stresses. Notwithstanding the pressures, Qatar's consumption and network leakage rates are high. Per capita household water use is one of the world's highest. People living in Qatar consume on average 310 litres each day, more than double the average for Western European countries (figure 6.1).

Qatar's domestic and industrial water demand is met primarily through desalination. Annual production of desalinated water has more than quadrupled over the past two decades to 2009 (figure 6.2). But despite the massive increases, production per capita has been declining in recent years. At the same time per capita water use has been rising, leading to rising water stress. Reducing network losses, investing in new technologies and adopting energy conservation measures are thus imperatives.

To address the various water-related vulnerabilities, the government will establish a national water act by 2016, bringing together a fragmented system of rules and quality controls into an integrated,

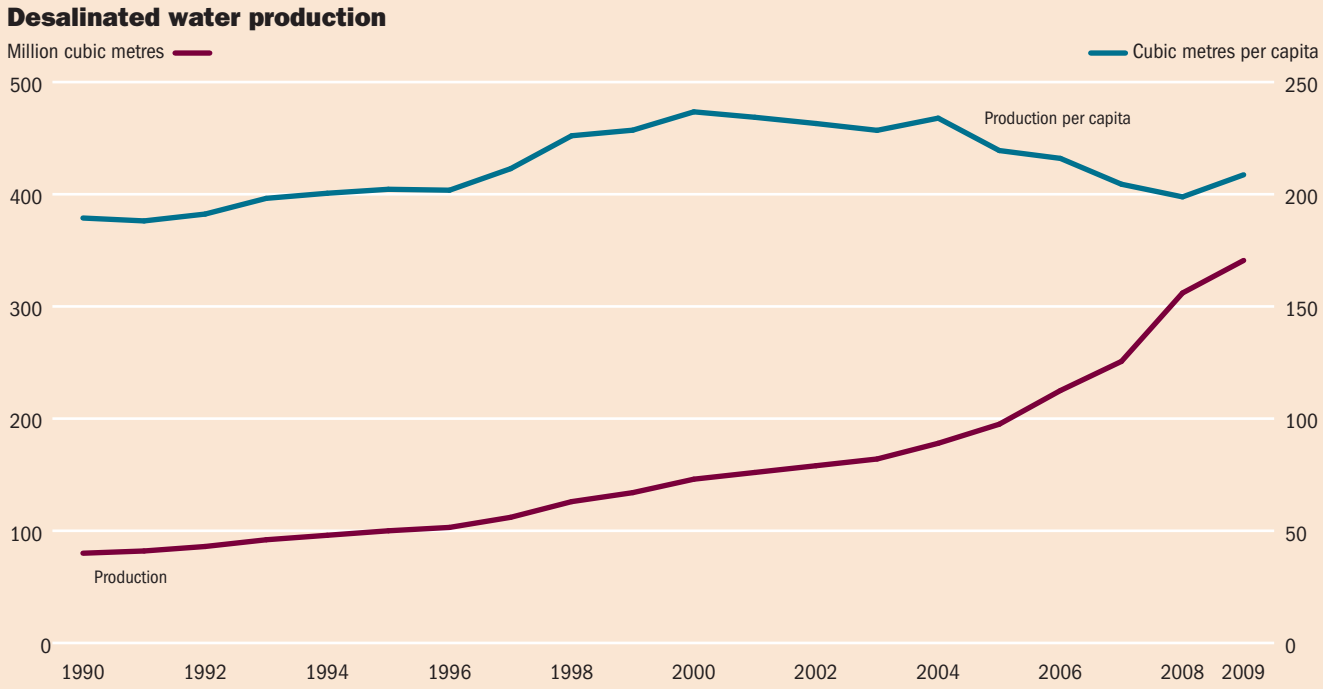
Figure 6.1 Reducing network losses and household consumption is key to sustainable water use



Note: Network losses include physical losses, apparent losses (water theft and meter inaccuracies) and unbilled authorized consumption.

Source: Kahramaa, *Statistics Report* (2008); Eurostat (2001); IFEN (2002); http://dardel.info/EauConsumption.html (2001, 2002); OECD, *OECD Factbook: Economic, Environmental and Social Statistics* (2009); EIU, Residential Household Consumption (2001, 2002, 2006) and Country Data Annual Time Series (2010).

Figure 6.2 Production of desalinated water has increased massively but has barely kept pace with population growth



comprehensive system. Shifts in tariff structures, combined with a broad campaign for public awareness, will help cut unnecessary water use and waste.

Qatar has become increasingly dependent on water produced from seawater, by means of costly and energy-intensive thermal desalination, which accounts for about half the water used in the country. But with rapid population growth and urbanization, the volume is soaring: use of desalinated water has tripled since 1995, reaching 312 million cubic metres in 2008.

Increasing demands on desalinated water are projected to continue—with heavy water losses, a growing population and higher household use. Based on current trends, consumption through 2020 is expected to increase 5.4% a year for Qataris and 7% a year for expatriates. As of 2009, however, studies show that Qataris consumed 1,200 litres per person per day, while expatriates consumed 150 litres per person per day. Compared with other countries, Qatar has low water tariffs (free for Qatari households and low-cost for non-Qatari households) that recover less than a third of the costs of water production.

Currently available desalination technologies limit how much new water the country can produce from seawater. A new power and water station to be commissioned in 2011 will increase capacity for desalinated water to 539 million cubic metres from the current 360 million cubic metres. The new facility will relieve some pressure, but further expansion will be difficult. A cogeneration plant takes up a huge area of land, and drawing seawater from shallow areas can result in poor quality intake water. High seawater salinity on the west coast and lack of space in the heavily populated east coast are substantial constraints. Adding to the threat of future shortages is the expected 2020 decommissioning of a Ras Abu Fontas cogeneration plant that will have reached the end of its technical life.

All countries experience network losses in their water systems—from unmetered use and leaks.

But Qatar's losses of desalinated water are unusually high, and given the overall pressures on water supplies, costly (see figure 6.1). The system loses an estimated 30%–35%, compared with an Organisation for Economic Co-operation and Development country average of 18%. The Qatari strategy for improved water management calls for an aggressive five-year programme to cut network losses.

Groundwater supplies also are critical, accounting for about 36% of water use, predominantly in agriculture. But these sources are being rapidly depleted, mostly by increased irrigation. An estimated 250 million cubic metres of groundwater are extracted each year, five times the 50 million cubic metres of freshwater recharge that comes from Qatar's meagre rainfall plus flows from Saudi Arabia. In the foreseeable future Qatar's freshwater reserves may begin to be used up as water demand continues to grow.

Groundwater supplies are also subject to high levels of waste and loss. Some are used for flood irrigation of open fields, a practice with high levels of loss to evaporation. By contrast, farms in the United Arab Emirates rely mostly on the more water-efficient "drip and soak" irrigation methods. Farmers in Qatar pay a small pumping charge but otherwise have free use of groundwater, which provides little incentive for conservation.

Meanwhile, quality of the groundwater system is a growing concern. Brine produced by certain farm processes is discharged back into the ground, raising the salinity of the remaining groundwater. Since this water is later deployed for irrigation and other agricultural uses, it increases the salinity of the soil. Substantial parts of groundwater reserves show salinity levels above what is considered suitable for irrigation.

Recycled water, or treated sewage effluent, is the only water source in surplus. It is used mostly in irrigation, accounting for 14% of water use. Treated sewage effluent can play a significantly larger role in industrial processes, district cooling and watershed management. Qatar now reuses about 24% of total freshwater supplies, compared with a 16% average among Gulf states.

However, Qatar lacks the infrastructure to deliver recycled water to every potential user. Partly because of this constraint, the supply of recycled water exceeds consumption, leaving about 40% of treated sewage effluent to be dumped into vast septic lagoons, creating problems for nearby communities.

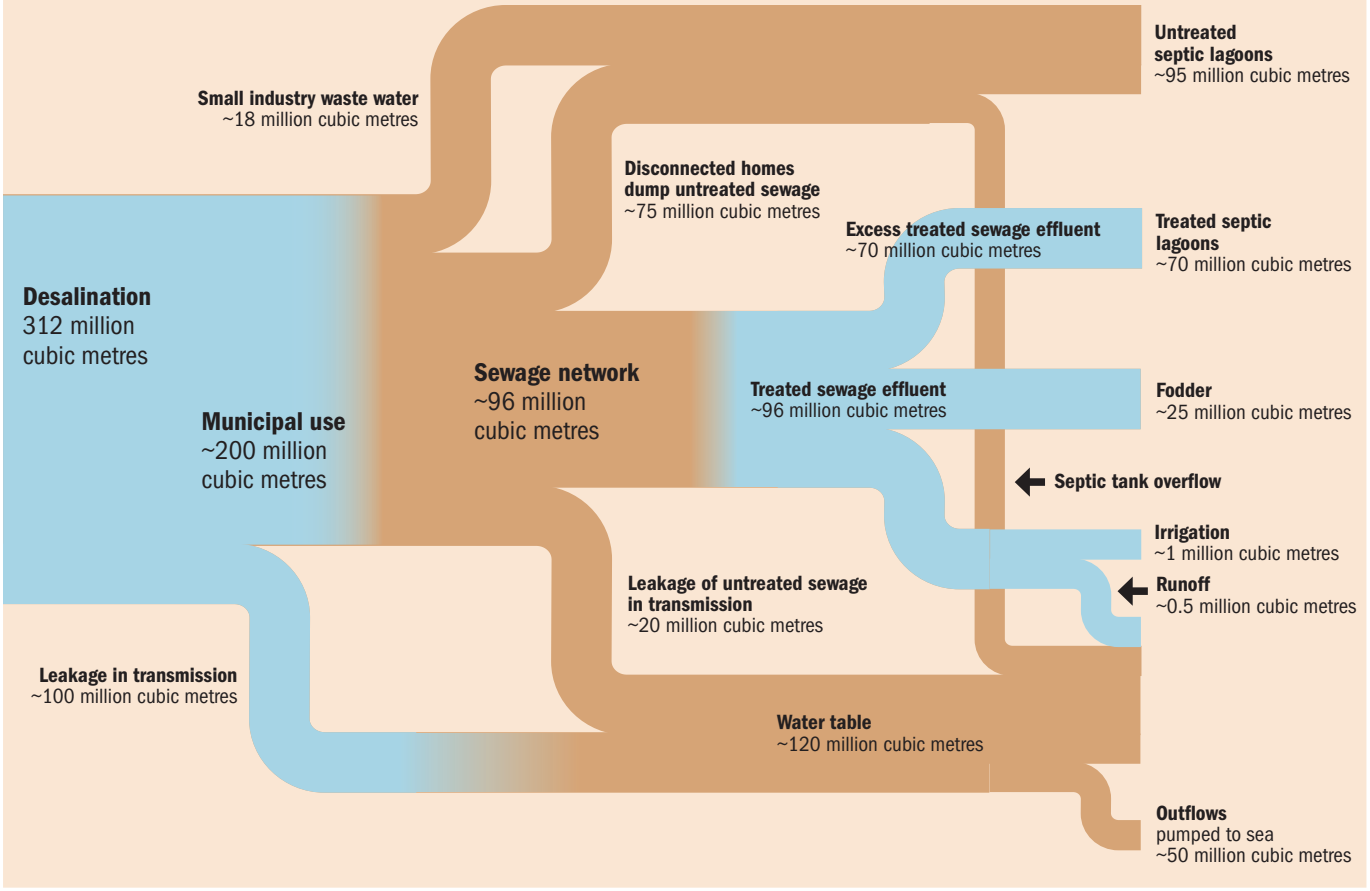
Qatar's strategy will address other water-related stresses, including improvements in the sewage treatment network and controls on wastewater dumped into the sea.

Rising groundwater, a problem for many cities around the world, is an acute challenge for Doha, where about a third of Qatar's desalinated water, or 110 million cubic metres, leaks into the city's water table each year (figure 6.3). The inflows to the Doha water table come from two sources: leakages from Kahramaa's clean water distribution network and leakage from Ashghal's sewage collection network. As a result of rising groundwater, some septic tanks are overflowing, posing serious health hazards—and costs for building projects are rising because construction teams must pump out large quantities of water and waterproof the foundations of new structures. The main response to the problem has been regular pumping of excess water into the sea, but that practice may be harming the marine environment. A study is now under way to assess the possible impact.

The government aims to reduce to zero the net inflow to the Doha water table. In the short term this will increase water discharges into the sea but under safeguards that minimize the harmful effects on marine life. The long-term plan envisions greater use of the excess flow for irrigation, wetland habitats and recycling. Wetlands can play a significant role as a biological filter, allowing less polluted water to recharge aquifers or flow into the sea with minimal damage to the marine ecosystem.

Critical to Qatar's strategy for sustainability is that some patterns can change if a mix of policies,

Figure 6.3 About a third of water produced leaks into the water table each year



information and technology can be brought to the challenge. In some areas, the government has already launched measures to alleviate recognized problems in water use. In other areas, the government has taken stock of particular stresses and set targets for change. Among other changes, the strategy should bring about lower water losses and use patterns that are better aligned with the needs of a water-scarce country.

A priority of the National Development Strategy 2011–2016 is to improve the management of water resources so that future generations do not face difficulties meeting basic needs.

National Water Act

The presently fragmented patchwork of laws and rules will be replaced by a comprehensive water policy, codified under a national water act and followed by a system of integrated regulation. The overarching goal is a set of policies and regulations through which the government will align consumption and supply over time while protecting water quality. Quality standards for industrial, agricultural and domestic uses will be critical to establish. In addition, controls on water discharge will be a crucial form of environmental protection.

Target

- Enact a comprehensive National Water Act establishing an integrated system of quality requirements, discharge controls and incentives for conservation—in place of today's fragmented system of laws and regulations.

Urban water table management plan

Kahramaa, the Qatar General Electricity and Water Corporation, is investing in piping and

leak-sealing operations to lower network water losses to 10% by 2016, from the present 35%. Tariff structures that encourage conservation, coupled with public awareness campaigns and mandated use of water-efficient appliances, could reduce consumption by as much as 40%, according to some estimates. These efforts, together with the reduced water losses, could add another decade beyond 2020 to Qatar's desalinated water supply.

Wastewater treatment facilities will be significantly expanded, and water discharge will be regulated for the first time, with standards for industrial, domestic and agricultural users.

The government will establish a system for monitoring diminishing fresh groundwater levels while taking stock of the full causes and consequences of Doha's rising water table. The government will work to eliminate excess flows into the Doha water table.

Challenges abound in shifting Qatar's water management to a sustainable, integrated plan. Raising awareness and inducing behaviour change are critical components of the strategy. Institutions such as the Qatar Green Centre, the Friends of the Environment Centre and the Ministry of Environment Public Awareness Group will play an increasingly visible role in fostering attitudes and consumption patterns supportive of environmentally sustainable development.

Target

- Monitor groundwater, conserve freshwater aquifers where possible and eliminate excess water in Doha's water table.

Cleaner air and effective climate change responses

Qatar's economic growth builds on the development of a global energy industry, the world leader of liquefied natural gas operations. Diversification into petrochemicals and metallurgy as well as cogeneration facilities providing desalinated water make Qatar's economy heavily dependent on energy consumption. The trend of rising energy production and consumption generates two immediate environmental impacts: increased greenhouse gas emissions and greater local pollutants and associated risks.

Thus, Qatar has two categories of air quality challenges. First, various local pollutants mix with particulates in the air—including chronically high levels of dust—to cause air quality problems that contribute to asthma and respiratory illnesses. Second, carbon dioxide emissions, mostly from energy production, add to greenhouse gases and contribute to global climate change. Qatar will develop a national policy to manage air pollution, greenhouse gas emissions and the broader challenges of climate change. All sectors of society—especially the private sector—have a role.

Improve air quality management

Qatar has seen a rise in pollutants that may be creating health risks. Among them are particulates (such as dust), nitrogen oxides, volatile organic compounds and ozone. Although average ozone levels meet international standards, there have been episodes where ozone levels exceeded safe levels (table 6.1). Under the government's strategy ozone levels would be controlled to eliminate any periods of excessive levels. The government is also committed to regulating volatile organic compounds.

In addition the government will develop an early warning tool to determine the sources of ozone pollution, including those in neighbouring countries. Increased dialogue and information sharing with neighbouring countries will support the effort.

High prevalence of asthma and other respiratory diseases is believed to be caused or exacerbated by these pollutants. A recent finding that almost a fifth of Qatari schoolchildren suffer from asthma is a serious concern. Links will be analysed in a study on air pollution and human health.

Table 6.1 Daily intervals reveal ozone levels that exceed safe levels in Doha (average number of readings above ambient air quality standards)

	Al Comice station[a]			Qatar University station		
Pollutant	**2007**	**2008**	**2009**	**2007**	**2008**	**2009**
Sulfur dioxide (daily)	0	0	0	0	0	0
Nitrogen oxide (8 hour)	7	0	0	0	0	0
Carbon monoxide (8 hour)	0	0	0	0	0	0
Ozone (8 hour)	8	0	1	2	9	11
Particulate matter (daily)	76	138	156	135	229	227

a. Near Movenpick hotel on southern end of corniche.

To be effective, the government's new air quality controls will require across the board upgrades of supporting infrastructures and institutions. Air quality monitoring stations will need to be integrated and unified to support an online database with real-time readings. Alongside new rules on emissions, the government will design systems for enforcing compliance, including penalties for violations.

Any comprehensive effort to reduce greenhouse gases will necessarily touch on consumption patterns. Energy consumption grew 57% from 2001 to 2006 as a result of a rapidly growing population and expansion in the energy and industrial sectors.

Reducing the energy intensity of electricity consumption will require awareness campaigns oriented to both the demand and supply sides of the equation. On the demand side new incentives and the effects of heightened awareness will prompt consumers to cut demand. On the supply side plant capacity can be optimized by allowing seasonal shutdowns of one or more plants. Combined, these initiatives can cut power generation by 7% by 2016.

The Qatar Sustainability Assessment System for Green Buildings will establish green building standards to which all government buildings will have to conform by 2016. Afterward, all new commercial buildings and residential buildings will be brought into the new regime.

Automobile traffic has increased, with the number of registered private vehicles rising 12% a year over 2003–2008, and the number of vehicles per household now at 3.6. To lessen automobile dependence, the government is planning a high-speed rail line connecting Doha, Bahrain and Saudi Arabia, plus an underground monorail. More broadly, current scrutiny of subsidized prices for fuel could lead to shifts that encourage conservation and therefore reduce carbon dioxide emissions.

To respond to the challenge of reducing greenhouse gases, the government is establishing a reporting mechanism to track national carbon dioxide emissions.

A recently developed modelling tool can be used to provide advance warning for air quality changes. Qatar will work with other Gulf countries to develop a predictive regional air quality modelling tool.

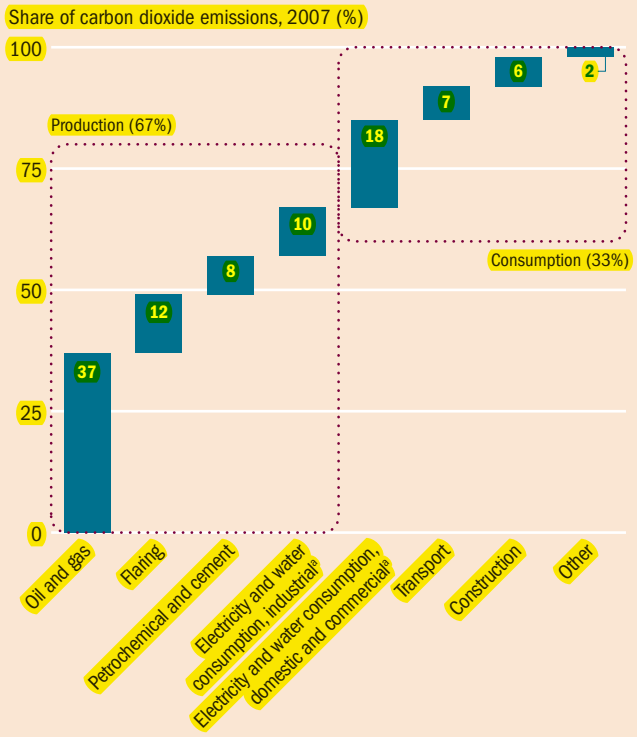
Target

- Eliminate instances of excess ozone levels through improved air quality management.

Reduction of gas flaring and venting

Fuel combusted during energy production accounts for 67% of Qatar's carbon dioxide emissions (figure 6.4). Of these emissions, 37% stems from energy expended in basic oil and gas production, about 12% is attributable to gas flaring, and another 18% results from petrochemicals and cogeneration of water and power for industrial users. Households and commercial users account for the remaining 33% of total emissions.

Figure 6.4 Two-thirds of Qatar's carbon dioxide emissions stem from heavy industry



	Levers to reduce carbon dioxide emissions	Current performance	Feasibility of reform
Production	• Reduce energy production trajectory	–	○
	• Reduce flaring	◔	◔
	• Capture carbon dioxide released from liquefaction process	○	◔
Consumption	• Demand management	◔	◑
	• Energy efficiency initiatives	◔	◔
	• Shift to alternative energy	◔	◔
Political	Reframe argument: • Highlight liquefied natural gas as greener than coal	◔	◔
	Demonstrate commitment: • Purchase offsets with energy revenue	◔	◔

– Not applicable.

a. Data from 2008 Kahramaa Annual Report were split, with 24% going to industrial use and 76% going to domestic use.

Qatar's carbon dioxide emissions are comparatively low—about 0.2% of the world's total. But as a major energy-producing country with a small population, Qatar is unfairly penalized when carbon dioxide emissions (from production and consumption combined) are measured on a per capita basis. By this yardstick Qatar emerges as the world's highest emitter (table 6.2). But Qatar would be ranked much lower if only emissions stemming from consumption were measured. Qatar lacks forests and green areas to offset the effects of greenhouse gas emissions.

Qatar is committed to working with other countries to address global climate change and to

Table 6.2 Qatar is ranked 58th in total carbon emissions but 1st in per capita carbon emissions (carbon dioxide emissions, 2005)

	Per capita emissions		Total emissions	
Country	Tonnes per year	Rank	Thousands of tonnes per year	Rank
Qatar	16.73	1	13,596	58
Kuwait	10.39	2	25,542	40
United Arab Emirates	7.5	3	33,770	33
United States	5.32	4	1,576,537	1
China	1.16	85	1,514,126	2
Russia	2.87	26	410,290	3

Source: Carbon Dioxide Information Analysis Center (2005).

eliminating inefficiencies that raise carbon dioxide emissions. Qatar, like its neighbours, is highly vulnerable to the various shifts that may result from climate change. Qatar is among the 10 countries that would be most affected by a rise in sea level, which could damage coastlines and marine life. If average temperatures rise, demand for water could increase, along with salinity in the groundwater. Climate change scenarios envision more weather extremes, which could mean heavy local flooding and sandstorms. Meanwhile, climate-related stresses in other countries could affect the price and availability of food imports.

In recent years Qatar has taken major steps to reduce carbon emissions—especially from gas flaring, which accounts for about 12% of total emissions. Emissions from gas flaring are among the most readily reduced. The steps include legislation to limit emissions, investment in cleaner technologies and improvements in industrial processes. Innovative research is under way on new carbon capture technology and sequestration in carbonate reservoirs for storage of carbon dioxide from the oil and gas industries.

In 2007 Qatar introduced its first United Nations Framework Convention on Climate Change Clean Development Mechanism, the Al-Shaheen Oil Field Gas Recovery and Utilization Project, which reduced flaring by about 80%. Facilities to be completed at the Al-Karkara field by 2011 have been designed to achieve zero gas flaring by injecting excess sour gas back into the reservoir. Transport technology that can carry 80% more liquefied natural gas than current carriers can will substantially reduce energy used per delivered unit.

The National Flaring and Venting Reduction Project will further reduce emissions from gas flaring, initially targeting the largest companies responsible for the bulk of flaring-related emissions. By 2016 the government is committed to halving the volume of gas flaring to 0.0115 billion cubic metres per million tonnes of energy produced.

Target

- Halve gas flaring to 0.0115 billion cubic metres per million tonnes of energy produced from the 2008 level of 0.0230 billion cubic metres per million tonnes of energy produced.

Reduced waste, more recycling and more efficient use

Globally, affluent societies tend to produce large quantities of waste. Qatar is no exception. With an active construction business, extensive hydrocarbon sector and growing number of high-income households, Qatar creates more than 7,000 tonnes of solid waste each day. Much of it is crowded into landfills; the underdeveloped recycling industry handles only 8% of the waste.

Domestic waste from households, markets and office buildings accounts for about 30% of the waste, while nondomestic waste from commercial, construction and industrial sites accounts for the rest. Currently 91% of nondomestic waste is taken directly to landfills, and the bulk of what is eventually recycled is picked through by companies that sift through the waste at the landfills. Environmentally sound waste management—including the monitoring, collection, transport, processing and disposal of waste materials—is essential in protecting human health and livelihoods.

Qatar will adopt a multifaceted strategy to contain the levels of waste generated by households, commercial sites and industry and to recycle much more of what waste is generated. In approaching the challenge of improved waste management, the government recognizes a hierarchy of actions to alleviate pressures on the environment, with the most preferable goal being the avoidance of waste (figure 6.5). Where waste cannot be avoided, the preferred goals would be to reduce it, reuse it and recycle it, and the least desirable action is to dispose of materials. The measures proposed in the National Development Strategy 2011–2016 will enable Qatar to progress up the waste management hierarchy towards the most preferable outcome of avoidance.

Figure 6.5 Waste management hierarchy

Establishing a solid waste management plan

The critical step will be establishment of a comprehensive solid waste management plan to coordinate responsibilities, activities and planning. The plan, to be aligned with the Qatar National Master Plan, will cover households, industry and commercial establishments, and construction and demolition. The plan will also provide classifications for different types of domestic and nondomestic waste, mapping their sources.

Special attention will be focused on supporting recycling, incentivizing waste reduction, promoting source separation and developing a robust recycling sector. Several initiatives will help build up the recycling industry.

The government has established an integrated domestic solid waste management centre in Mesaieed that will be operational in late 2011. The centre is expected to reduce the share of domestic waste disposed of in landfills to 3%–5%, thereby reducing the share of total waste sent to landfills from 92% to 64% (figure 6.6). It will also convert waste to energy and raise the level of waste recycling from 8% to 20%–25%.

There will be five transfer stations (South Doha, West Doha, Industrial Area, Dukhan and Al-Khor) equipped with collection bunkers for separating recyclables such as glass, paper, aluminium and plastic, which will help reduce the quantity of waste.

To capture the benefits of source separation, a proposed new material recovery facility will handle pre-separated recyclables from domestic and nondomestic waste. The facility will further reduce waste sent to landfill to 53% and boost waste recycled to 38% by 2016. In the longer term a nondomestic waste management centre will be required to further increase recycling.

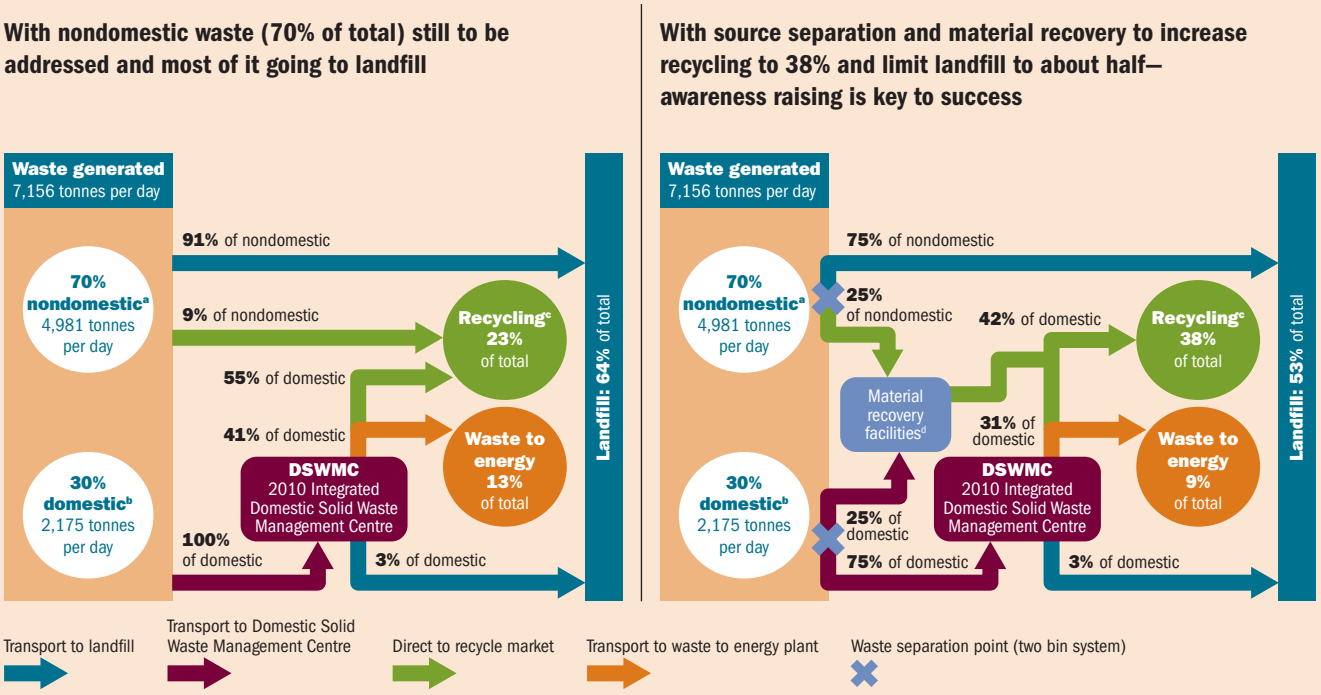
New policy initiatives will encourage recycling firms, transport companies, trading firms selling recyclable exports and manufacturers that use recycled material. For example, the government may consider providing subsidized land and utilities to encourage more firms to enter the recycling business. The Waste Recycling Committee, in partnership with the Ministry of Business and Trade, could arrange subsidies to jump start the local recycling industry, subject to review after five years. Public awareness campaigns will encourage waste separation, collection networks and recycling bins.

To generate new recycling activity, the government will sponsor demonstrations and public awareness activities. Citizens will be made aware of the opportunity to use recycled products, such as furniture made from recycled wood or the 300 tonnes of compost produced daily in Mesaieed. Citizens also will be encouraged to see waste reduction and recycling as an ordinary responsibility, adopted out of respect for future generations.

Currently, most of Qatar's nondomestic waste ends up in a single landfill, at Umm Al Afai, which has become a nuisance for neighbouring communities. The government will formulate plans for closing this landfill at the earliest possible date, once an alternative site for the nondomestic waste is established.

Hazardous waste is a special concern, but there are no organized data on the nature and locations

Figure 6.6 Qatar's existing and prospective plans for waste management



a. Includes furniture, packaging waste, some electrical appliances and discarded items from construction activities that are described as development or maintenance waste (such as concrete formworks, pipes, ceramics, glass, metal and the like.

b. Includes mixed household and commercial (office and market) waste.

c. Includes composting.

d. A single material recovery facility could be used in place of multiple facilities if a nondomestic solid waste management centre is constructed near the domestic solid waste management centre.

of hazardous waste, no capacity for its reduction or recycling and no treatment capability for combustible or radioactive waste. The Solid and Hazardous Waste Management Framework, adopted in 2009, will yield a detailed and comprehensive plan for coordinated waste management responsibilities, taking into account all sources.

Targets

- Establish a solid waste management plan, strongly emphasizing recycling.
- Recycle 38% of solid waste, up from the current 8%.
- Contain domestic waste generation at 1.6 kilogrammes per capita per day.

Nature and natural heritage conserved, protected and sustainably managed

Qatar's biodiversity is equally a part of its heritage and its future, embedded in the natural life support system that needs to be protected over time. In Qatari culture, natural conservation is understood to be a religious and moral duty.

In Qatar, as in many countries, biodiversity is facing threats from a range of human activities. Population growth and rapid urbanization have put pressure on the delicate balance of natural endowments, crowding out some elements in the biodiversity mix. Construction and industrialization are impinging on fragile coastal habitats and disrupting marine life. International shipping and trade have introduced invasive species that pose threats for indigenous species. Overfishing has emerged as both an ecological concern and a threat to future food supply. As a result of all these trends, some 31 species, ranging from the Arabian oryx to the green turtle and the brown shark, are categorized as threatened with extinction.

Climate change also has implications for Qatar's biodiversity, but scenarios remain imprecise. Nevertheless, warmer sea temperatures and higher sea levels will inevitably disrupt marine ecosystems in ways that could create new strains for future generations.

Creating a national biodiversity database

To support needed analysis and eventual protection of the country's biodiversity, the government will back detailed surveys that establish biodiversity baselines to enable decision-makers to build new protections based on solid evidence.

Qatar has already experienced a preview of some of the biodiversity strains brought on by climate change. In 1996, 1998 and 2002 the Arabian Gulf experienced record ocean heat, with temperatures rising as high as 38 degrees Celsius, that stressed the marine ecosphere. The turtle populations of Qatar, one of the country's most famous and endangered species, are particularly sensitive to climate change. If temperatures continue to rise, experts warn of the potential for mass deaths of turtles and fish, coral bleaching, flooding of sea turtle nesting grounds and a substantial increase in jellyfish. Systematic monitoring of Gulf sea temperatures, taking into account seasonal variations, thus needs to be part of the proposed database.

Meanwhile, it is now understood that overgrazing extensive areas of grassland has resulted in a loss of grasses and plant types and in a general decrease in vegetation density. This in turn has reduced animal life, increased wind erosion and caused losses in soil fertility.

Ensuring that protected zones and national parks function constructively is also a challenge. Qatar has six protected areas, covering 22% of its land surface, but studies conclude that the network has not realized its potential. A national park must protect and monitor designated species, while promoting safe ecotourism, and, where appropriate, allow hunting and grazing.

Surveys by the Environmental Studies Center, Qatar University, the Friends of the Environment Centre and private companies have yielded conflicting data on the species present in Qatar. The confusing mix of findings underscores the need for a reliable and comprehensive biodiversity database and careful monitoring of changes.

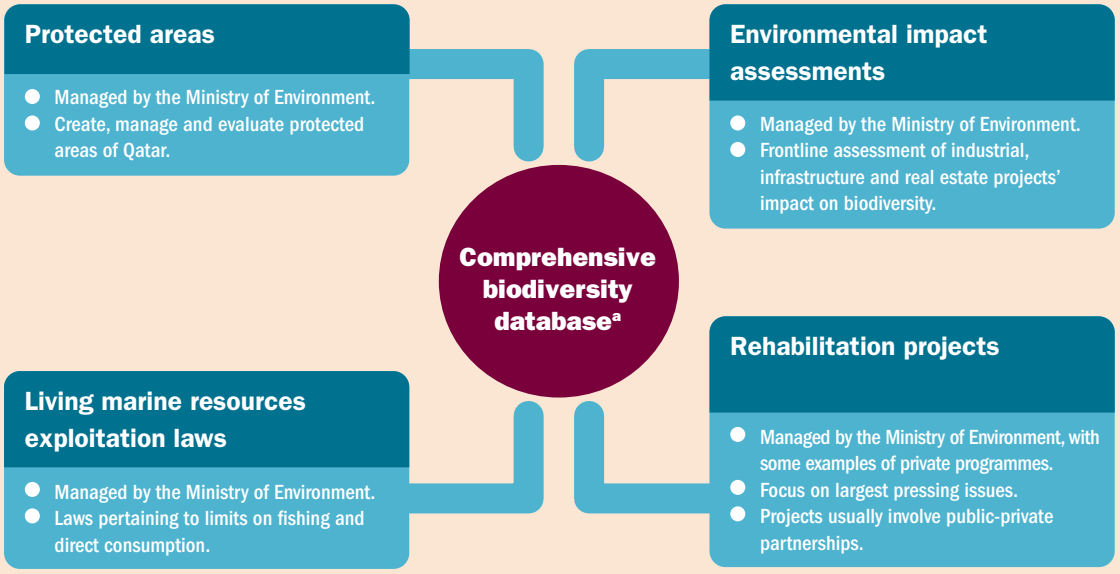
The National Development Strategy 2011–2016 envisions a series of practical steps, beginning with establishment of a central database by 2016 to inform decision-making, improve management plans and support regional activities. The database will draw on international best practice in design and could eventually be extended to cover the entire Gulf Cooperation Council. Regional databases exist in other parts of the world and are connected with global information sources, but none currently exists in the Gulf Cooperation Council (figure 6.7).

A few rehabilitation projects can raise awareness and demonstrate the value of restoring habitats and protecting vulnerable species. Expanded and more actively managed protective areas can help specific mammal or marine populations regain healthy reproduction patterns away from the stresses brought on by human activity. Environmental impact assessments that incorporate biodiversity analyses would be required for any new industrial, infrastructure or real estate project.

Experts have come to view marine life as a finite resource, like oil or water, under pressure from a population growing in wealth and size. Since 1995 the total catch in Qatar's seas has quadrupled, with most of the fish locally consumed. But in a trend that highlights a worsening sustainability problem, the total catch in 2006 continued to rise —despite a freeze on new commercial licences— while the per capita catch began to drop.

Several fish species are being depleted, though precise data are not yet available. More thorough regulation and consistent enforcement will be vital to conserving this critical resource. Supportive fishing technologies—such as net meshes that

Figure 6.7 Qatar's biodiversity management framework is contingent on the availability of a comprehensive biodiversity database



a. Database would involve survey of existing species, populations and extinction threat level. Once established, monitoring of data would continue to expose endangered species.

allow young fish to swim free—can reverse some of the effects of overfishing; aquaculture, which has helped other countries lessen the pressure on fish populations, also holds potential.

The government will introduce a series of living marine resources laws that limit fishing and consumption for threatened species. Preventing overfishing is an enormous challenge. Qatar's Fisheries Department is currently understaffed, contributing to ineffective monitoring systems and an overall increase in the fish catch despite restrictions designed to lessen the pressure on fish populations.

Win-win opportunities for economic and environmental gains exist. Qatar can benefit from developing effective regulations that will increase fish stock levels while diversifying its economy through the creation of a domestic aquaculture capability to meet future demand (see chapter 3).

Apart from overfishing, stresses on an array of marine species have been evident in recent years:

- Mass deaths of turtles and marine mammals.
- Destruction and bleaching of coral reefs.
- Increase in red tides, which stem from concentrations of microscopic algae that create toxins dangerous to fish and humans.
- Increased coastal flooding and erosion of coastal habitats, including nesting areas for turtles.

The additional stresses brought about by climate change add new challenges. These include accelerated coastal erosion, higher sea-surface temperatures and changes in the distribution of pathogenic microorganisms. Together, the shifts could substantially affect marine biodiversity.

Targets

- Establish a comprehensive electronic biodiversity database.
- Expand actively managed protected areas.

More sustainable urbanization and a healthier living environment

Doha has grown exponentially, supported by a construction boom of striking contemporary

buildings. But the capital lacks the benefits that urban green spaces provide. Much of the city is devoid of sidewalks, bicycle lanes and tree-filled areas closed to automobile traffic. People are surrounded by buildings and, at peak times, congested roadways. To continue Doha's expansion without incorporating greenery and open spaces would increase Qatar's sustainability challenges. Urban conditions over time would become more crowded, and more subject to noise and pollution. Bringing a green dimension to urban planning could strengthen sustainability and make cities more liveable. The risk of respiratory disease and the strain of congested and sedentary living patterns would diminish for future generations. Health problems such as the high rates of obesity, heart disease and diabetes would be lessened.

The absence of green space is not inevitable. Other densely populated cities such as Hong Kong, Mexico City and Singapore have spaces set aside for greenery and recreation. The world's best known and most visited cities are as a rule enriched by parks, tree-lined avenues, public gardens and leafy residential areas. These features make cities more liveable and attractive and yield two public health benefits. First, people are drawn outdoors for recreation and leisure; second, the trees filter pollution and cool the air. In addition, greener, more liveable cities are more appealing to high-skilled expatriate families and tourists, which Qatar would like to continue to attract.

Functional green spaces

Significant shifts in the makeup of Doha are envisioned. The government is devoting special attention to the urban environment, which affects the lives of its citizens. Although Doha's initial design did not incorporate green spaces, the government's strategy for improved environmental management calls for the city to be retrofitted in ways that more effectively balance the natural and built environment. To make Doha a greener city, the government plans a network of green spaces as ribbons of tree-lined areas rather than large, open parks.

By 2016 there would be three tree-shaded corridors free of car traffic. Planners will also design green spaces within future construction programmes. There would be two green infrastructure plans—a new residential area and a commercial zone—plus a third parcel for mixed use. City managers will produce an annotated map showing existing planting schemes. Added to these will be demonstration planting schemes providing shelter and shade. One inner city green route, between high-rise blocks and the City Centre Mall, will provide shade and greenery.

A greener capital will support other environmental priorities. The addition of broad canopied trees should help improve air quality by absorbing pollutants and trapping windblown sand and dust. Certain solid waste could be converted into compost and used as a planting base. In addition, the surplus water gathering in the city's rising water table could be drawn down to maintain the various green spaces. The added green spaces and trees would likely support the goal of protecting animal habitats, because migrating birds could nest in the city's trees.

Target

- Establish three shady greenspace corridors in Doha and monitor their effect on urban air quality and health.

An increasingly environmentally aware population

Successful environmental management will require active engagement through society. Large commercial corporations and policy-makers have important roles to play. And so does every individual.

There has been increased reliance on the automobile as well as high electricity and water consumption, including frequent car washing and lawn sprinkling using the country's scarce desalinated

water. Air conditioning accounts for two-thirds of the electricity used for residential purposes. Moreover, Doha's skyscrapers are often continuously air-conditioned and fully lit. The present patterns of growth and consumption need to be better managed in order to secure health and prosperity for future generations.

There is also evidence that a deeper environmental awareness is growing. For example, schools have added environmental studies programmes to the curriculum. Civil society organizations focused on the environment—including the Qatar Green Centre, the Friends of the Environment Centre, the Barwa Qatari Diar Green Buildings Institute, the Qatar Natural History Group and the Qatar Bird Club—are building membership and support. Although these groups do not yet have the clout of similar nongovernmental organizations in countries where the environmental movement is further established, they show that Qatar harbours an environmental consciousness that can be strengthened and expanded.

Environmental awareness

The government will enlist the population in supporting and sustaining improved environmental management. The campaign to protect Qatar's environmental endowment can draw on foundational values embedded in the country's religious and cultural heritage. The notion of protecting the environment for the benefit of future generations has broad appeal.

To make the environmental movement more visible and influential, the government plans to appoint a respected national figure to serve as a champion for the cause. Demonstration projects can also have an impact. A far-reaching schools and environment programme can build on the United Nations Children's Fund Ecoschools proposal, with links to local initiatives underway at the Qatar Green Centre and the Friends of Environment Centre. Specific industries, such as office management and communications, will be encouraged to demonstrate the benefits of green design and practice. New construction projects—such as the planned airport—could also showcase design features for green buildings.

Targets

- Build an environmentally aware society.
- Appoint a well known national champion for the environment to raise awareness and commitment through demonstration projects and conversation partnerships.

Improved governance and regional and international cooperation

The government recognizes that transitioning to sustainable environmental management requires effective and accountable institutions. Government teams will require unambiguous goals plus clear lines of responsibility for delivering on them. Decision-makers will need to identify areas where international expertise can be tapped, so that Qatar can benefit from the most innovative thinking as it approaches one of the world's most challenging sets of environmental vulnerabilities.

Government will be making critical decisions on uses of water and power, airborne emissions, waste management and conservation of the natural endowment. A culture of evidence-based policymaking will be needed, to be backed by information systems that ensure both informed decisions at the outset and continuous monitoring to guarantee compliance and, over time, to measure impact.

Environmental information database

Comprehensive and accessible documentation will be needed at all levels. Knowledge sharing—across ministries and between government and the private sector—will be encouraged. Private sector actors, academics and research institutes will be fully informed and given incentives to seek solutions to particular environmental challenges.

To make concrete the principles of gathering and sharing better information, the Ministry of

Environment will mandate new reporting requirements, with all major industrial companies submitting quarterly environmental performance reports covering their emissions, water discharge and hazardous waste treatment. Policy-makers will provide a template for all companies to use for these reports.

The ambitious pace of change in management of the environment will place significant demands on the Ministry of Environment. Despite recent investments in training, there remain shortages of professionals with needed scientific skills. The ministry will need to strengthen capacity so it can fully monitor the environmental impact of a rapidly expanding economy.

The government will recruit technical specialists to guide the development of standards for resource management and environmental protection. To advance a practice of "joined-up government," the National Development Strategy 2011–2016 envisions stronger interdepartmental dialogue on environmental issues, including interministerial exchanges and staff secondments.

When new investments and projects are undertaken, sponsors will need to carry out environmental impact assessments covering foreseeable consequences for the environment, including animal and plant life, and plans to mitigate negative impacts.

Gathering such assessments in an environmental information database, accessible to the public, could eliminate inefficiencies. Currently, such studies are neither centrally stored nor accessible. Companies often undertake studies that others have already completed.

A central information repository could combine data from Qatar's Biodiversity Database, its Air Quality Management Project and its Waste Management Project. Keeping this information base current, coherent and accessible will facilitate links between science and environmental policy.

Target

- Create a searchable electronic information source at the Ministry of Environment.

Strategic partnerships

Addressing environmental concerns is a cross-generational, cross-border exercise. One key function of government in the environmental sector is to forge strategic partnerships with neighbouring countries as well as private firms and international organizations such as such as the United Nations Educational, Scientific and Cultural Organization, the United Nations Environment Programme and the World Health Organization, which can provide key knowledge, human resources and technology. Qatar's environmental challenges are shared to some degree by countries in every region of the world. Qatar will adopt an outward-looking, internationalist view to build partnerships that maximize the chance of successfully adapting both policies and technologies. The government will support several Qatar scholars each year to prepare them for environmental leadership.

Within the Gulf region countries share the challenges of hydrocarbon-driven growth and desert conditions, including water scarcity. Moreover, because pollutants do not stop at national borders, environmental problems spill over, requiring regional rather than national solutions. Strong regional cooperation will require continuous diplomacy and cooperation at all levels. Just as the national government will require national databases to support environmental regulation and policies, the Gulf region will need regional databases to support regional initiatives.

Given its resources and commitment to strong environmental management, Qatar has the opportunity to assume a leadership role in the environmental field. By continuing to work with countries in the region through platforms such as the Gulf Green Initiative and through international environmental protocols, Qatar can build some of the critical links with governments, think tanks and the private sector.

There are specific areas where Qatar could establish leadership. For example, Doha could be held up as a demonstration city for innovation in managing problems related to rising urban water tables. Other leadership opportunities exist in Qatar's establishment of a regional air quality monitoring programme and a regional biodiversity database.

The National Development Strategy 2011–2016 calls for the government to lead at least one regional environmental project by 2016. Such platforms as the Gulf Green Initiative and other international environmental protocols and agreement are opportunities for dialogue and regional leadership. All governments are seeking ways to encourage investment in technologies that protect the environment and to develop strategies for regulating environmentally damaging activities.

The private sector's role in environmental conservation and preservation is critical and is understood in the context of corporate citizenship. Companies can be a source of pollution as well as incubators of innovations that can restore the ecological balance. Examples of corporate citizenship should be applauded—such as Qatar Petroleum's sponsorship of research into sea turtles, a species threatened by extinction. To encourage more public-private collaboration, the National Development Strategy 2011–2016 calls for at least two projects to be implemented with the private sector by 2016.

As Qatar diversifies beyond hydrocarbons, there is clear potential for the country to become a global leader in the environmental sector. Frontier research and development initiatives currently under way at the Qatar Foundation's Qatar Science and Technology Park can help realize this potential. Doha may emerge as a global laboratory for addressing urban water tables, creating a biodiversity database and launching a regional air quality monitoring programme.

Target

- Lead one regional environment effort, and launch two environmental projects involving private sector participation.

Deepening the national commitment—creating the knowledge base

The National Development Strategy 2011–2016 is designed to guide Qatar through a crossroads, balancing rapid economic expansion with protection for the environment and the natural endowment. The environmental programme calls for a range of policies and investments to offset the stresses of rapid population growth, industrial activity and urbanization (box 6.1). Equilibrium between growth and ecological sustainability will support the national foundational commitment to intergenerational equity.

New policies will require careful analysis of current evidence, along with modelling of future trends. New environmental technologies require research, regional and global links and adaptation to local conditions. Management systems will need to adjust. Taken together, these requirements point to a knowledge agenda that underlies the shift to improved environmental management.

As with any ambitious agenda for governance, the government will develop new capacities and areas of expertise, including:

- Institutional ability to write and enforce regulations.
- Mechanisms for tracking the environmental impact of various economic activities and the growing economy in general.
- Techniques for measuring shifts in the marine environment, water supplies and air.
- An approach for monitoring groundwater levels, because aquifer reserves are being depleted at an unsustainable rate.
- Models for tracking and monitoring the health of endangered species.

Longer term, Qatar will need sophisticated environmental institutions capable of building public awareness, encouraging the most promising technologies and carrying out environmental research.

Knowledge in managing scarcity

Over time, Qatar will need to become adept at managing scarcity. For example, by substituting

Box 6.1 Major environmental interventions carry knowledge demands

Qatar will support 11 projects to strengthen national environmental management across all key sectors. Through a lens of knowledge building, each intervention will require study of global experience, assessment of local economic, social and environmental conditions, and careful adaptation. Evidence-based policy-making in each area will carry extensive knowledge demands. The 11 projects called for in the environmental strategy from 2011 to 2016 are:

- National water act: creating an integrated governance framework for water regulation.
- Urban water table mitigation: carrying out research, measurement and rule-making to manage Doha's rising water table.
- National flaring and venting: creating systems for monitoring gas flaring in Qatar, establishing flaring guidelines and developing a plan for reduction.
- Air quality management: establishing a database and regulatory structure to mitigate unhealthy airborne contaminants.
- Solid waste management: creating structures and guidelines to encourage recycling and reduce waste generated by domestic and commercial establishments.
- Targeted recycling: employing public-private cooperation to jump start the underdeveloped recycling industry.
- National biodiversity database: developing a comprehensive conservation programme to create a benchmark study of local species and doing more to protect them through conservation areas, rehabilitation of habitats, environmental impact assessments for development projects and new legal guidelines on consumption.
- Functional greenspaces: creating a network of high-canopy greenways in Doha, equipping the city with a natural respiratory system that could reduce pollution and provide shade and recreation for residents.
- Environmental awareness raising: making a broad communication effort to shift public sensibilities with respect to balancing economic prosperity and environmental protection, critical to building support for environmental management into the future.
- Environmental information management: creating a searchable, electronic data source on the environment—fully accessible and kept current within the Ministry of Environment.
- Strategic partnerships: encouraging regional collaboration to mitigate the effects of pollution arising from development activities.

knowledge or technology for water, all users could get the maximum benefit out of the water they draw from the country's limited supply. Understanding tariff structures and demand management will be crucial as the government creates fee structures that discourage waste and incorporate at least partial cost recovery. Such structures can be consistent with the government's concerns for equity, because more water will be available for everyone when wasteful use is discouraged.

Knowledge for sustainability requires a reliable and detailed profile of the present situation that takes into account water use and discharge, air quality and emissions, solid waste including hazardous materials, and biodiversity. The government will build new databases and formulate new ways of managing knowledge.

In some respects, knowledge development has not kept pace with the country's unprecedented economic expansion, urbanization and population growth. Qatar will emphasize a scientifically astute generation, comfortable with technological innovation and change.

In many areas, Qatar has demonstrated a capacity to set goals and achieve them. Its successes in the energy sector supported investments that helped achieve high human development. Basic and secondary education are now universal, and over two

decades child mortality was halved and several diseases were eradicated.

The government has also actively addressed knowledge and capacity deficits that could impede development of environmentally sustainable management systems and a knowledge-based economy. In 1995 the Qatar Foundation, with $2 billion in resources, began investing in education, research and capacity development at all levels. It supports a variety of programmes based at international universities operating in Education City. The fund also supported the 2009 creation of the Qatar Science and Technology Park, focusing on energy, environment, health sciences and information and communication technology. A competitive research programme managed by the Qatar National Research Fund brings together academia, government and the private sector. In 2006 the government committed to spending 2.8% of GDP on research, bringing the level of government research support up to that of the world's major industrialized economies.

Other countries are embarking on similar struggles to establish clear policies for environmental sustainability, but there is no internationally accepted index for measuring progress or setbacks. For example, loss of marine biodiversity is not well defined or integrated into any widely used models. In some areas experts are still debating which concepts are applicable and have yet to identify the data to be collected. Further off still is the development of indicators for measuring improvement.

Integrated knowledge

In moving to a comprehensive model of sustainable growth, Qatar will nurture analytical approaches that cut across disciplines. Although many specialized forms of knowledge and technical skills will be needed, the government will work towards an integrative system, avoiding the development of knowledge in separate, parallel cylinders. The education system will support a more diverse productive base, which in turn will connect to a balanced programme of growth and conservation of resources.

The need for integrated thinking and cross-sectoral coordination is central in addressing stresses in the water system, for example. Integrated water management involves an entire value chain, beginning with a balanced economic structure and targeted population growth carrying through to a recycling phase (figure 6.8). Stakeholders span many corners of government, requiring the Ministry of Environment, operating at the centre, to develop the skills for cross-sectoral networking, planning and execution.

Culture of information sharing

Equally important in the long-term agenda, Qatar will develop the capacity and the culture for routinely processing, sharing and interpreting information. This, in turn, requires an open, transparent culture where knowledge bases are kept current and easily accessible. Enlarging the discussion space for full participation by the private sector and civil society will help encourage new solutions to environmental challenges.

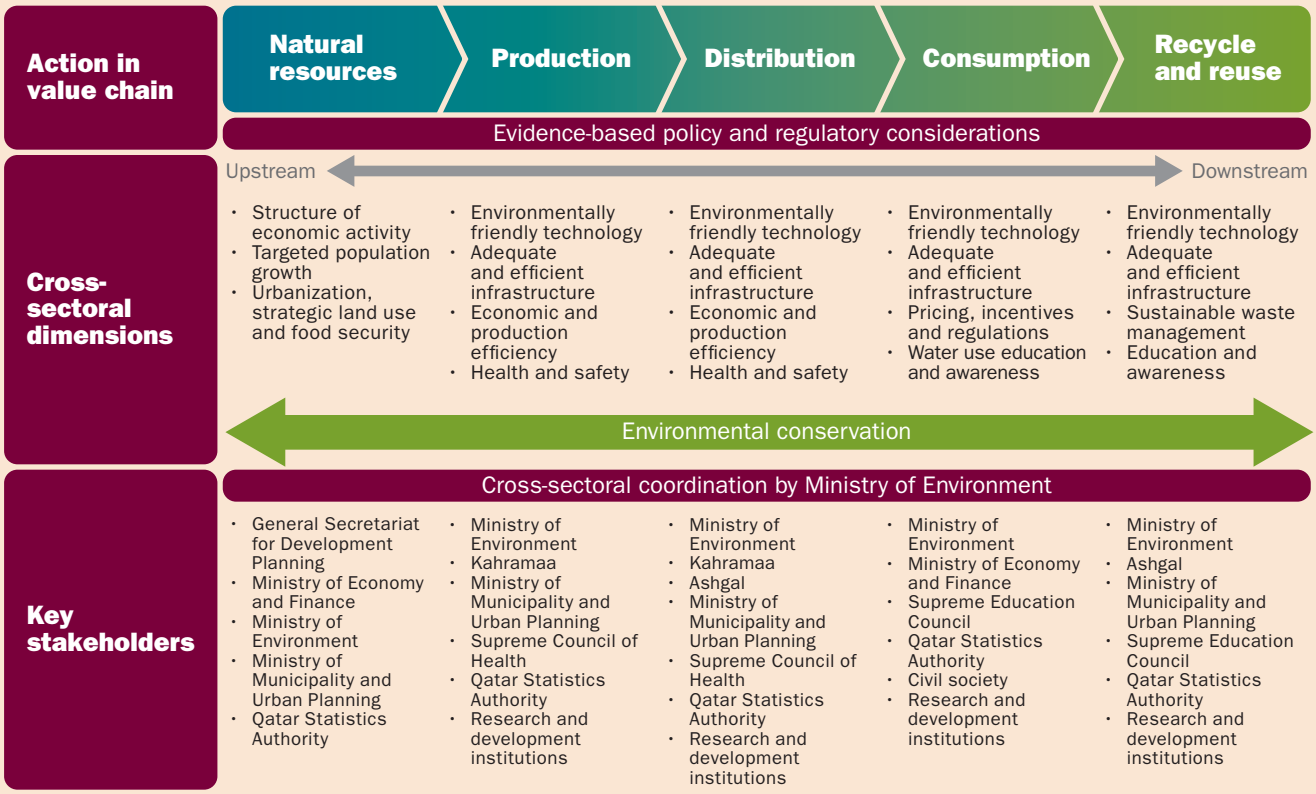
The Ministry of Environment collects an abundance of information, but reports come in different formats, and few are regularly made available to the public.

In establishing functional knowledge systems, the government will be in a strong position to monitor both compliance with and impacts of new policies and regulations. The government will employ various vehicles for strengthening the knowledge base for environmental management. Potential approaches include the following.

Pilot projects and demonstrations. Officials can learn from experiences carried out on a small scale before moving to systemic changes. Possible demonstration projects include:

- A pilot programme testing the use of recycled, nonpotable water to irrigate urban green spaces.

Figure 6.8 Integrated water management across the value chain



- Demonstration projects involving recycling.
- Tree-planting demonstration projects in Doha.
- Demonstration projects to showcase green office spaces.

Research. Specific studies can fill identified information gaps. Examples include:

- A hydrology study to understand the extent and impact of seawater inflows along the coast.
- A study of urban air temperatures showing the variations between green, leafy areas and blocks filled with buildings and roadways.
- Studies of human health and air quality links.

Partnerships and cooperation. Links allow a form of knowledge building that is dynamic and fluid. Examples include:

- An international conference on rising urban water tables.
- A study of practices in low-flaring countries such as Canada and Norway.
- A regional air quality conference.
- A regional biodiversity database.

Knowledge relationships in the region will be particularly useful in understanding the realities of climate change. Different regions and countries can expect different shifts over time. But desert coastal countries whose economies depend on hydrocarbons may face similar challenges and could benefit from pooling information.

Knowledge can be acquired and lodged in electronic databases or published studies, but Qatar will ultimately need a population capable of critical thinking, along with the necessary scientific expertise and training to assess environmental challenges and tailor solutions that enable the country to honour its obligations to future generations.

To maintain support for sustainable environmental management and intergenerational equity, policy-makers will need not only to make knowledge available but also to make it accessible and relevant

to citizens. The effort will require openness as well as strategic awareness-building. Information will have to be distilled and presented in formats that nonscientists can grasp—without oversimplifying or distorting the content.

Citizens will need to understand what is at stake in the paradigm shift that the government is setting in motion and what they and their families have to gain. Individual commitments to saving water and electricity and avoiding unnecessary car travel will require programmes to inform and mobilize. Without such efforts, concern for the environment will become a preoccupation of only a small circle of elites.

To maintain momentum, the government will capture and make known experiences of measurable progress—for example, restraint in the use of desalinated water, new recycling activity, energy-saving efficiencies in buildings and reductions in natural gas flaring.

Building the human capital for sustainable environmental management will require a clear assessment of the existing knowledge and current capacity needs. Consultations with relevant institutions and stakeholders will be part of such an exercise.

Finally, placing Qatar's resource management on a sustainable path for future generations will depend on critical innovations, such as new desalination technologies that minimize the cost and environmental impact of production, renewable energy applications that lower carbon dioxide emissions and alternative transport strategies. Building an education system, a network of partnerships, a private sector policy and a research strategy that makes such breakthrough innovations more likely will be among the government's key knowledge efforts.

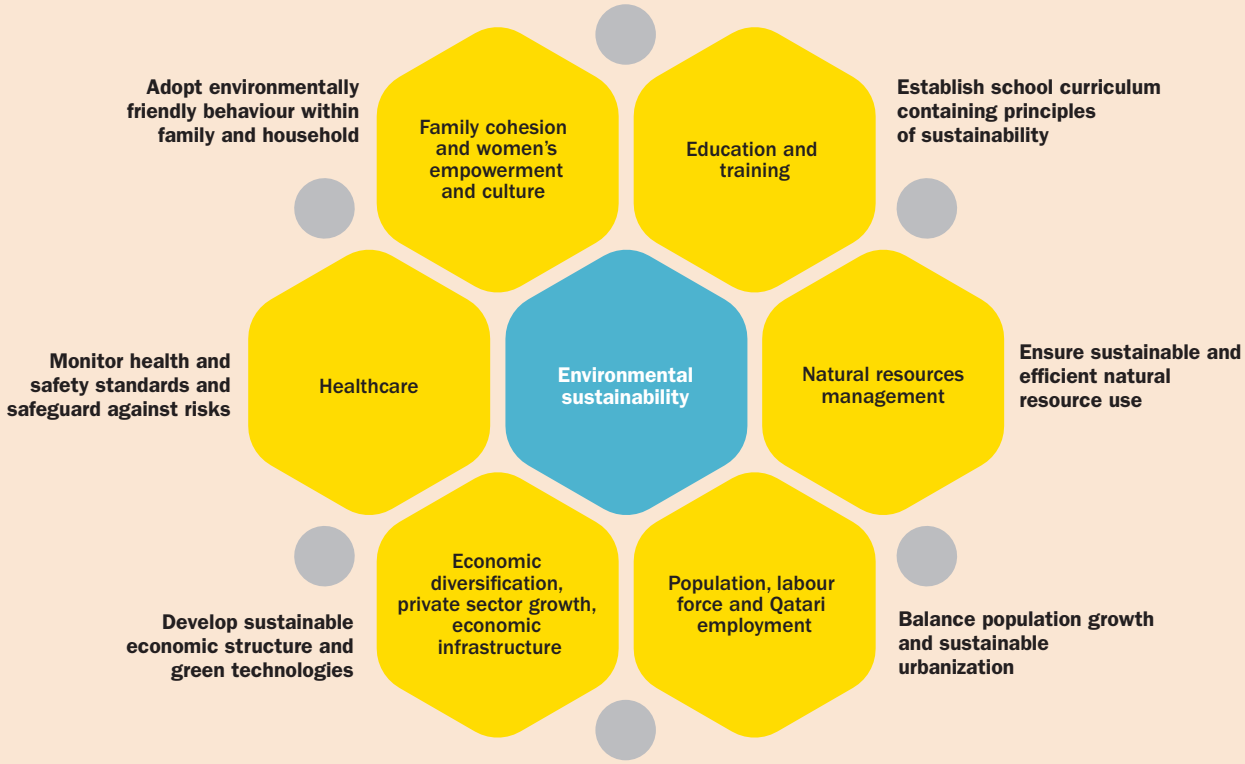
Fostering cross-sectoral links

In many respects, tackling environmental challenges lies at the heart of the broader paradigm shift envisioned in *QNV 2030*. The goals of a more diverse economy built on knowledge development, a highly trained population and capacity for innovation all feed into improved environmental management. In turn, progress in solving Qatar's environmental problems would advance the other development goals.

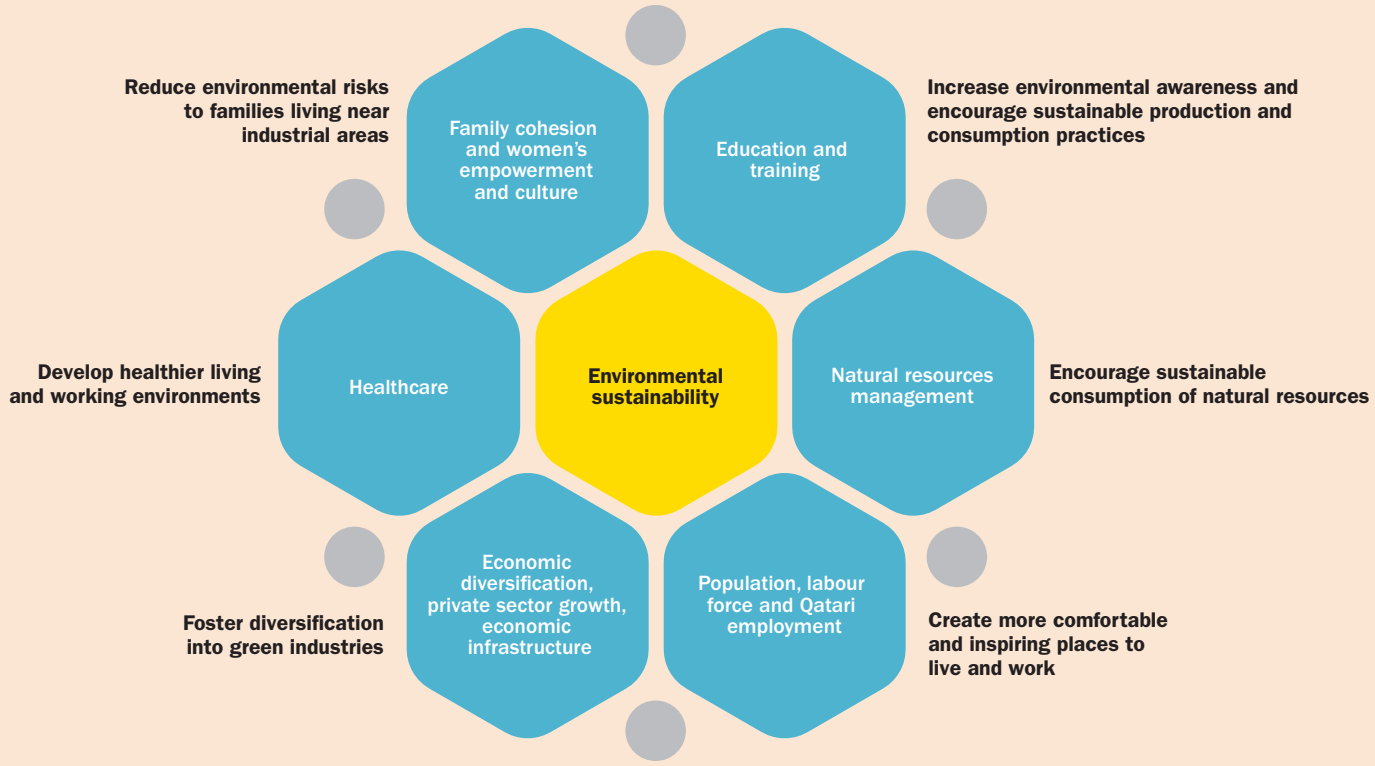
Qatar's strategy for improved environmental management is at the centre of the larger National Development Strategy 2011–2016 (figure 6.9). The environmental programme will be supported by other priorities, such as diversifying the productive base and creating an education system that supports the principle of sustainable development. At the same time, in achieving the environmental goals Qatar will contribute to a more diverse economy and a healthier population. The two-way links will add momentum to achieving the full array of strategic targets.

Figure 6.9 Environmental sustainability is both a goal and an enabler to achieve the aspirations of *Qatar National Vision 2030*

Other sectors as enablers for environmental sustainability



Environmental sustainability as an enabler for other sectors

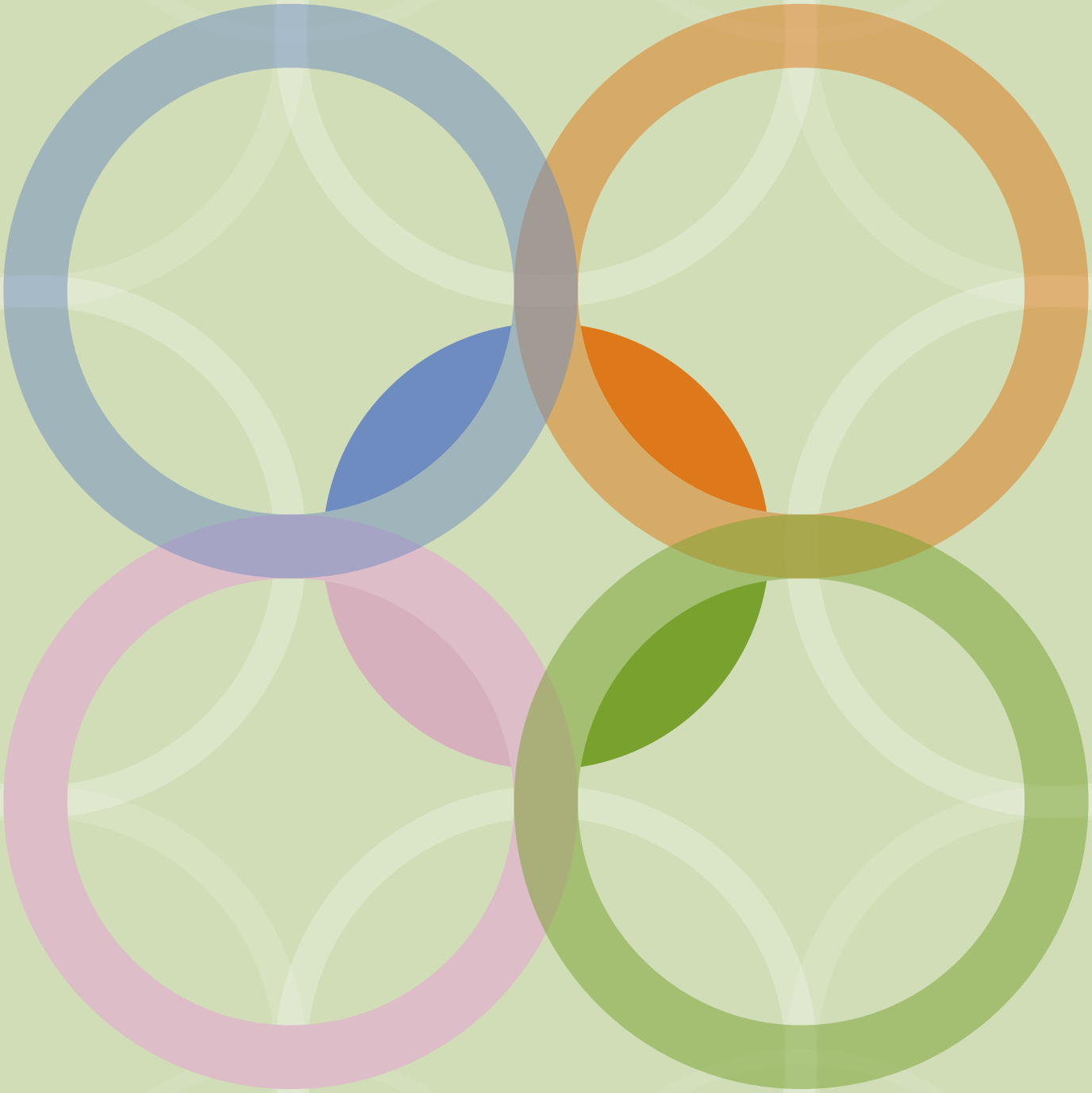


Part 3

Institutions and implementation

Chapter 7

Developing modern public sector institutions



7 Developing modern public sector institutions

Qatar needs strong public sector institutions to reach the goals of *Qatar National Vision 2030 (QNV 2030)* for social progress, human development, a sound and diversified economy and a sustainable environment. Achieving these goals will require institutional and organizational capacity building, efficient and transparent delivery of public services, fruitful public-private cooperation and partnerships, a vibrant climate for business and a larger space for civil society.

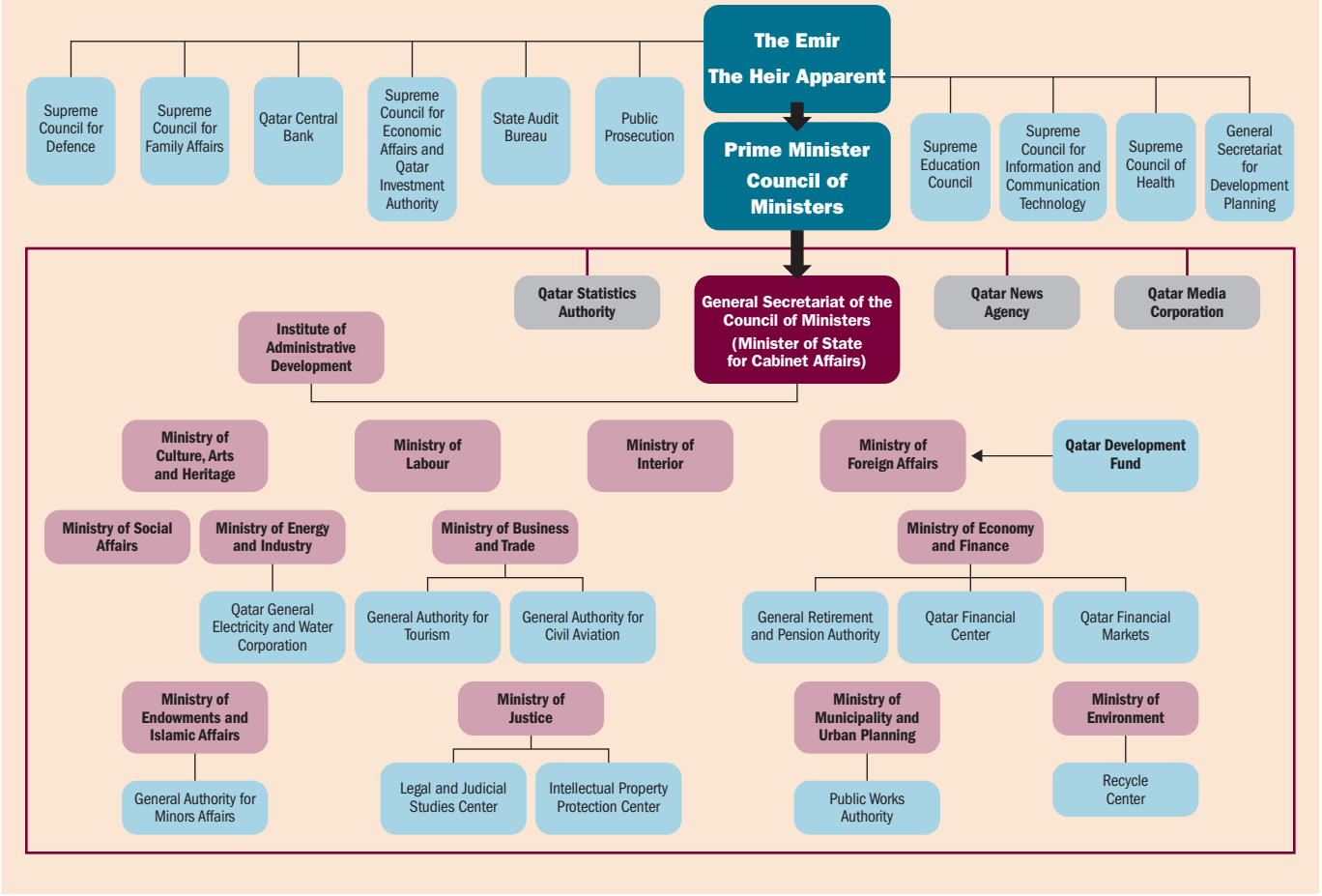
Qatar's institutions of public administration are evolving rapidly and striving to meet the needs of citizens and customers of institutional services. The Public Sector Development Project of 2007 recommended changes in the institutional framework. It motivated the government's 2008 restructuring and the move towards a ministry portfolio-based approach of aligning accountability for a given policy area within one ministry, improving governance, focusing on outcomes, increasing cross-ministry coordination and reducing fragmentation in decision-making.

Improved service delivery depends on credible, client-focused and capable institutions that deliver timely and accountable services to citizens and respond to their concerns. Achieving that will require an unwavering commitment to modernizing all aspects of government that cuts across all sectors and areas of society. Continuously searching for ways to make institutions more efficient will strengthen Qatar in prosperous times and buffer it against shocks in recessionary times.

Qatar's government structure includes ministries, Supreme Councils and other government agencies (figure 7.1). Their Highnesses the Emir and the Heir Apparent head the executive authority, assisted by the Cabinet and Prime Minister and six Supreme Councils. The Cabinet is charged with overseeing policy execution. The Secretariat of the Council of Ministers (Minister of State for Cabinet Affairs) provides a critical link between the ministries and the Prime Minister/Council of Ministers. Ministries and other government agencies report to the Cabinet and are responsible for executing the relevant public policies and programmes. The Supreme Councils provide opinion and advice, as well as having regulatory responsibilities. To support transparency, accountability and governance, several central agencies report directly to the Emir and the Heir Apparent, including the State Audit Bureau, General Secretariat for Development Planning (GSDP), Public Prosecution and the High Committee for Transparency. About 90,000 employees, Qataris and expatriates, work in the government and other public sector institutions.

Public sector development and modernization will focus on developing the capabilities of these institutions of the state and on strengthening institutional collaboration. Building the foundations of the future state and ensuring high levels of government performance will require extensive collaboration and a culture of teamwork among line ministries and agencies at all levels—ministers, department heads and section

Figure 7.1 Current organization structure of Qatar's public sector institutions



heads—and strong leadership. Critical in moving the public sector forward are the support of top leadership and greater power for middle management.

The drivers and levers of institutional development and modernization

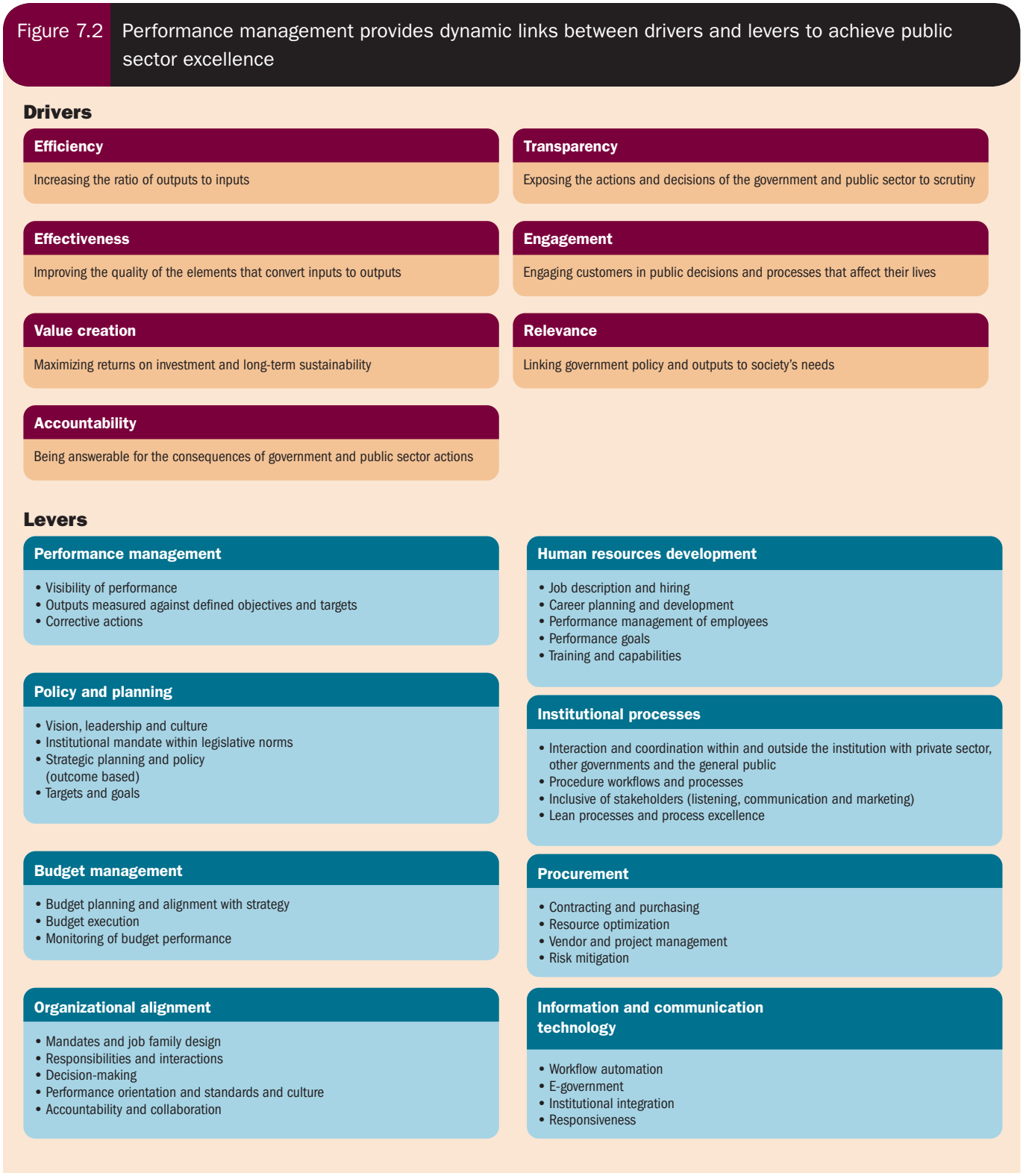
Two linked concepts—based on benchmarking best practices in other countries that have successfully modernized their public sectors—underlie institutional development and modernization.

One is the *drivers* of modernization, factors that influence performance and the need to modernize and that serve as measures of institutional success: the public sector's efficiency, effectiveness, value creation, transparency, accountability, relevance and customer engagement (figure 7.2).

The other is the *levers* that institutions must apply to modernize: policy and planning, budget and financial management, human resources development, organizational alignment, procurement, institutional processes, information technology and performance management.

Formulating the right approach to modernization and successfully adapting and applying the drivers and levers require understanding the government's institutional framework. Strengthening the drivers of modernization requires improving the levers (lower part of figure 7.2): focusing on the levers to build institutional capability will enable an institution to be more efficient and effective, create more value and so on. Focusing on policy and planning, budgeting and financial management, organization, human resources, institutional processes, procurement, information technology

Figure 7.2 Performance management provides dynamic links between drivers and levers to achieve public sector excellence



and performance management will help build the necessary expertise and capability in these important levers of modernization. Developing and modernizing these levers will strengthen the drivers of public sector performance: improving efficiency and effectiveness, creating value, becoming more relevant and transparent and demonstrating accountability in delivering results.

Mapping Qatar's institutional development and modernization journey

Mapping Qatar's public sector modernization journey for the National Development Strategy 2011–2016 employed benchmarking, situation analysis, diagnostics and focus areas for modernization (definition of future state) (figure 7.3).

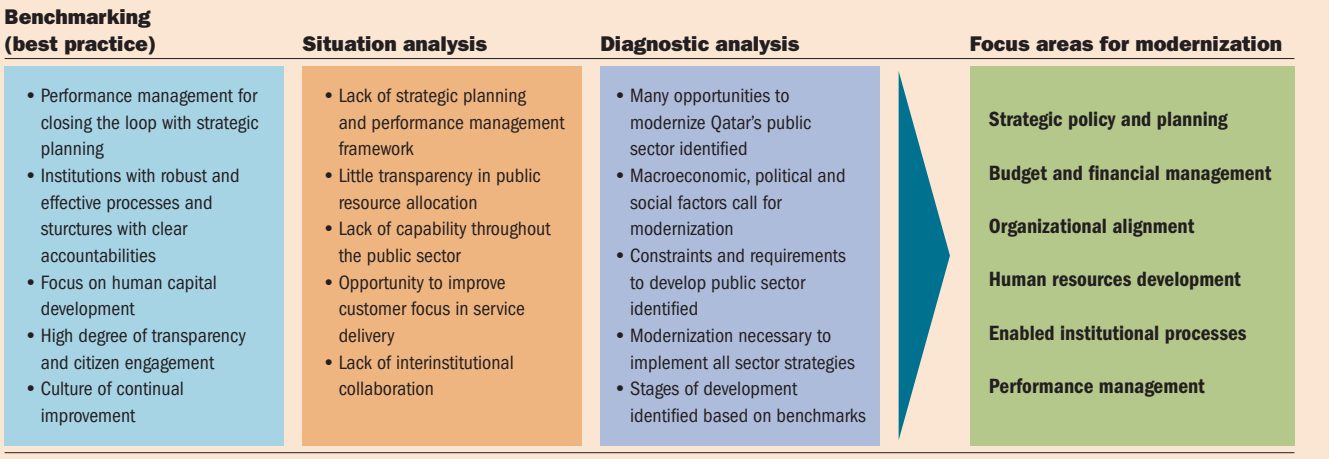
Benchmarking best practices around the world

Benchmarking focused on the drivers and levers of modernization in five countries, identifying best practices in public sector performance around the world. The five were Australia, Canada, Norway and Singapore, identified for international best practices, and the United Arab Emirates, identified for regional comparison. All five have implemented structural changes in public sector organization and service delivery and greatly improved public sector performance, particularly service delivery. The benchmarking analysis identified building blocks for Qatar's transition to modernization. The countries selected demonstrate excellence in public sector performance (government efficiency, ease of doing business, policy and regulations and delivery on promises) and institutional performance (openness and effective governance mechanisms for expenditure, dispute and regulatory management).

Countries with modern institutions and excellent public sector performance exhibit similar characteristics: a commitment to continuous improvement, enduring dedication to change, sustained mobilization of resources and the ability to learn from mistakes. Modern, well developed public institutions have robust processes. They focus on human capital development, practice performance management and deliver public services consistently with efficiency and effectiveness, meeting the expectations of stakeholders. They show a high degree of transparency and citizen engagement and clear accountabilities, and they set higher and bolder annual targets. Several models have been developed to examine how countries achieve excellence in public sector performance, but there is no single model to emulate. What has worked in other parts of the world might not be fully applicable to Qatar. Best practices based on the analysis of benchmark countries are summarized by lever in box 7.1.

Evidence shows that the key focus areas for countries modernizing their public sectors are the eight levers noted above. Building institutional capacity around these levers strengthens the drivers of modernization, which in turn serve as measures of outcomes for a country's population. Elevating the importance of human resources management, for example, leads to increased employee capabilities. A more capable public sector workforce is more

Figure 7.3 Mapping Qatar's public sector institutional modernization journey



Box 7.1 Best practices, by levers of public sector performance

Each best practice identified through benchmarking can be translated into distinct projects for public sector modernization. Projects are refined later in the chapter and adapted to Qatar's needs.

Performance management: decentralized outcome- and output-based measures but centralized monitoring

- Measure periodically across individuals, organizations and public services.
- Ensure central monitoring by the Ministry of Finance or equivalent.
- Establish outcome- and output-based performance management with closed feedback loop.

Policy and planning: inclusive, bottom-up with citizens' engagement

- Conduct robust evaluation of all alternatives before issuing a policy.
- Allow departments and agencies, not just ministries, to initiate policy.
- Enable citizens to comment on draft policies online.

Budget management: multiyear, performance-oriented, closely built on policy and planning framework

- Allow for multiyear budgeting of programmes.
- Develop and prepare the annual budget process within a strategic multiyear framework.
- Shape budgets to the policy framework and tie to performance management.
- Coordinate centrally but allow for flexibility.

Organizational alignment: autonomy to empowered departments with appropriate governance

- Empower functional agencies as political actors (setting their own strategic goals and targets and allocating resources).
- Set organizational frameworks to align ministry and agency structures.
- Establish appropriate checks and balances.

Human resources development: building capability and performance management

- Attract and retain the best talent by providing the right incentives and a healthy work environment.
- Establish transparent and performance-based career development paths.

Institutional processes: citizen-centric and featuring cross-agency collaboration

- Design processes to meet citizens' expectations and needs.
- Provide one point of contact with customers.

Procurement: transparent and fully automated procurement

- Establish a common information platform for public procurement.
- Develop clear processes and an easily integrated system.
- Manage public e-procurement across the country.

Information and communication technology: easy to use one-window service

- Offer one-window services online across institutions.
- Establish a common government information platform, with data sharing.
- Engage citizens by involving them virtually.

productive and achieves greater impact for its citizens. Optimized institutional processes minimize errors and cost and therefore increase the efficiency of the public sector. Similar examples can be cited for the other levers, leading to a positive impact on citizens.

Countries use different sets of drivers to measure public sector performance and frame modernization efforts. Singapore, for example, singled out productivity, quality, timeliness, responsiveness, effectiveness, efficiency and accountability in a model to improve public services. No one country demonstrates best practices in every lever. The best practice examples were selected for practical application in Qatar; for instance, Singapore provides a better example of policy and planning for Qatar than does Norway.

Benchmarking also identified five strategic enablers and five operational enablers for applying best practices in modernization.

The five *strategic enablers* are building central capability before considering decentralization, institutionalizing the dissemination of central capabilities, clearly describing roles, changing employee behaviours and attitudes, focusing on the enablers of behaviour and mindset change, and creating leadership in the middle and focusing on managerial value added.

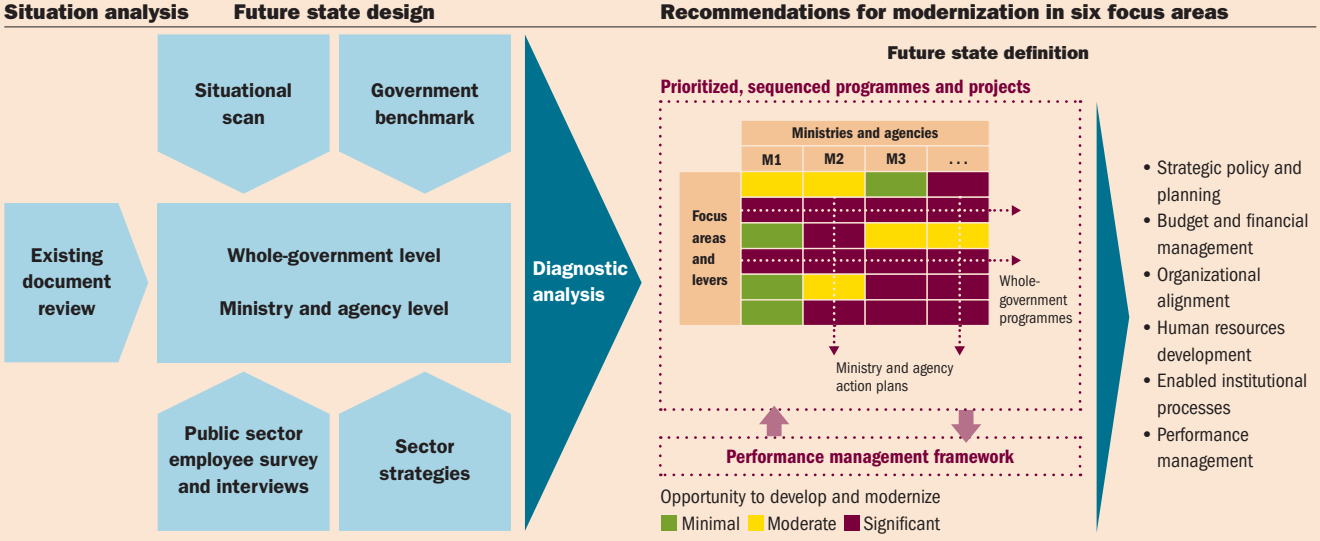
The five *operational enablers* are developing budgets around outcomes and programmes rather than institutions, prioritizing actions that simplify processes and maximize stakeholder and customer impact, operationalizing performance monitoring and coordination, systematically managing performance of inputs as well as outputs and outcomes, and giving change a chance by standing behind decisions over the entire commitment period.

The *situation analysis* painted an overview of the public sector and identified Qatar-specific opportunities for modernization along the levers and linked to the benchmarking outcomes. It drew on a review of documents on institutional development from previous work of GSDP and Cabinet departments; responses to a public sector performance questionnaire sent to all ministries, agencies and supreme councils; and a public sector employee survey that assessed employees' engagement with their work and willingness and readiness to change. Figure 7.4 summarizes the approach taken in selecting and sequencing the proposed institutional development and modernization projects.

A *diagnostic analysis* examined the gap between best practices and Qatar's current state. It analysed internal and external factors for modernization and defined maturity stages over the next few years. The inputs from benchmarking, situation analysis and diagnostics were then used to define the future state and to provide the basis for 16 projects for developing and modernizing Qatar's public sector.

Institutional development and modernization of Qatar's public sector will require a phased, prolonged effort to achieve well planned structural change. Initially, in a foundation building phase, change should be simple and focused on achieving ownership by all ministries and agencies, including by public sector employees. Change management is needed to balance the pace of change with the ability to incorporate and sustain it.

Figure 7.4 Project approach leading to prioritized and sequenced modernization programmes

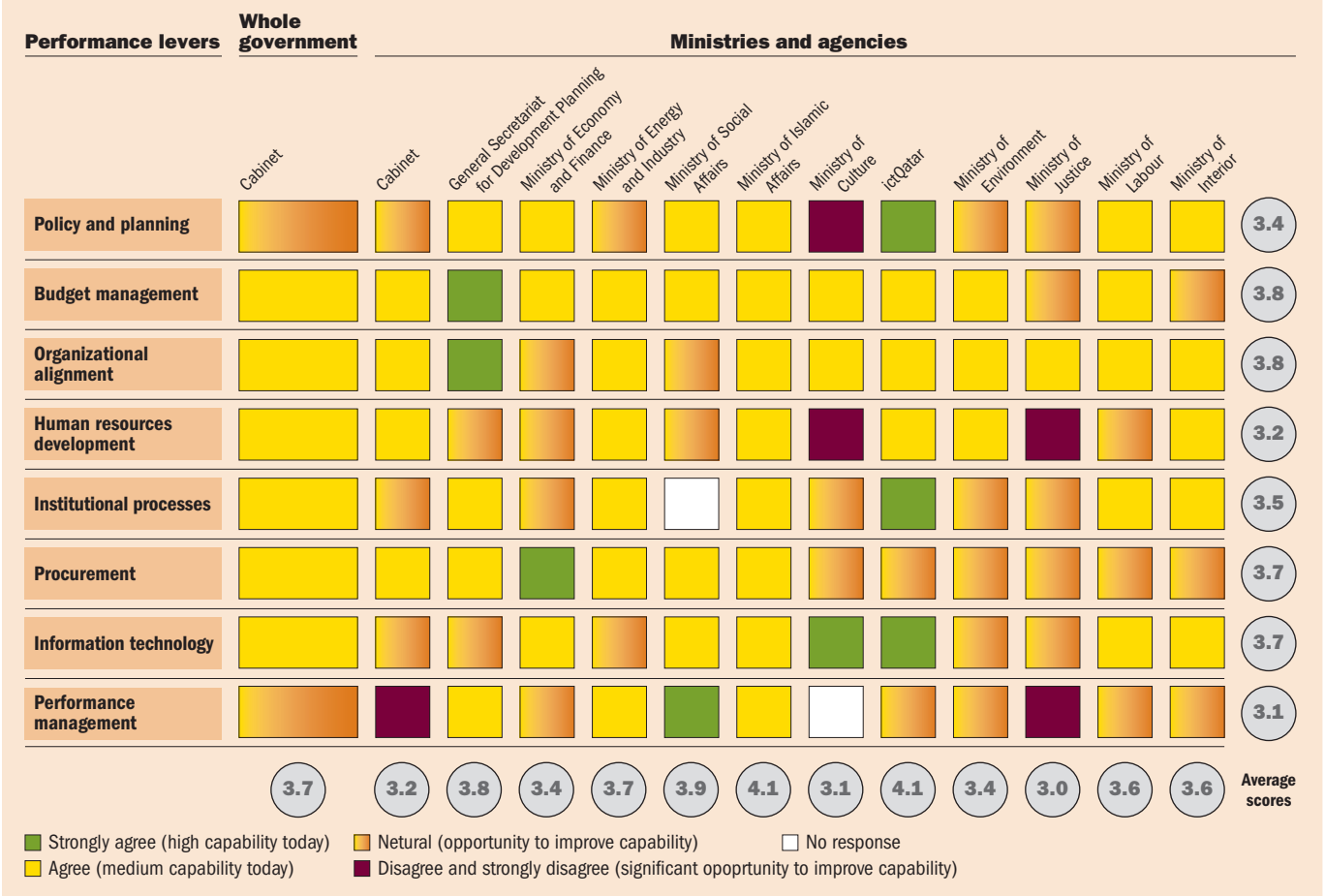


To build a strong foundation, two projects must start during the planning phase: expanding the support role of central functions and developing a public sector performance management framework. Because line ministries and agencies lack the comprehensive and robust capabilities and capacity needed to implement all the National Development Strategy 2011–2016 projects, the central functions in government will be vital to rolling out the modernization projects, by providing coordination between ministries, offering objective advice and defining the delivery of programmes to address critical challenges that cannot be addressed by a single ministry. The government performance management system will better support and focus efforts and resources on ensuring that the National Development Strategy 2011–2016 is implemented successfully. Key performance indicators will inform government about gaps in performance and ways to bridge them moving forward.

Institutional assessment of public sector performance levers

As part of the situational analysis and diagnostics of the institutional development and modernization strategy, government central functions, ministries and agencies responded to a questionnaire intended to assess the levers that institutions need to apply to enhance public sector performance. Each lever was self-assessed against best practice international benchmarks and scored on a scale of 1 to 5, where 5 denotes strongest agreement with best practice. Figure 7.5 summarizes the findings from the perspective of the whole of government and of specific institutions. From the whole-government response, the policy and

Figure 7.5 Self-assessed public sector performance



planning and performance management levers stand out as requiring greatest capacity improvement. These findings are supported by results from previous studies. At the institutional level there is considerable variation among ministries and agencies in the ranking of the levers, with performance management, human resources and policy and planning offering opportunities for capacity development.

Possible pathways to public sector institutional development

To measure public sector institutional performance, a model was constructed using the *QNV 2030* pillars and desired outcomes as a starting point in developing a set of whole-government indicators for measuring country-wide outcomes that will be affected by public sector performance (figure 7.6). All indicative indicators will be measured and published regularly. As the performance management system becomes more embedded in the reporting structures of government, the number of indicators can be expanded.

To modernize the public sector, executives must understand the stages along the way (figure 7.7). These stages were derived from the benchmarking exercise, tempered by an understanding of Qatar's unique circumstances. Institutions are in the initial stages of modernization, with varying degrees of readiness, willingness and ability to absorb more change. Thus, speed needs to be balanced with the ability to absorb, adopt and sustain change.

Careful sequencing of projects will be important to accommodate links across levers; for example, capacity building in finance to reform budgeting processes and in information and communication technology to develop citizen-centric platforms and a central database.

Figure 7.6 Constructing a public sector performance model for Qatar

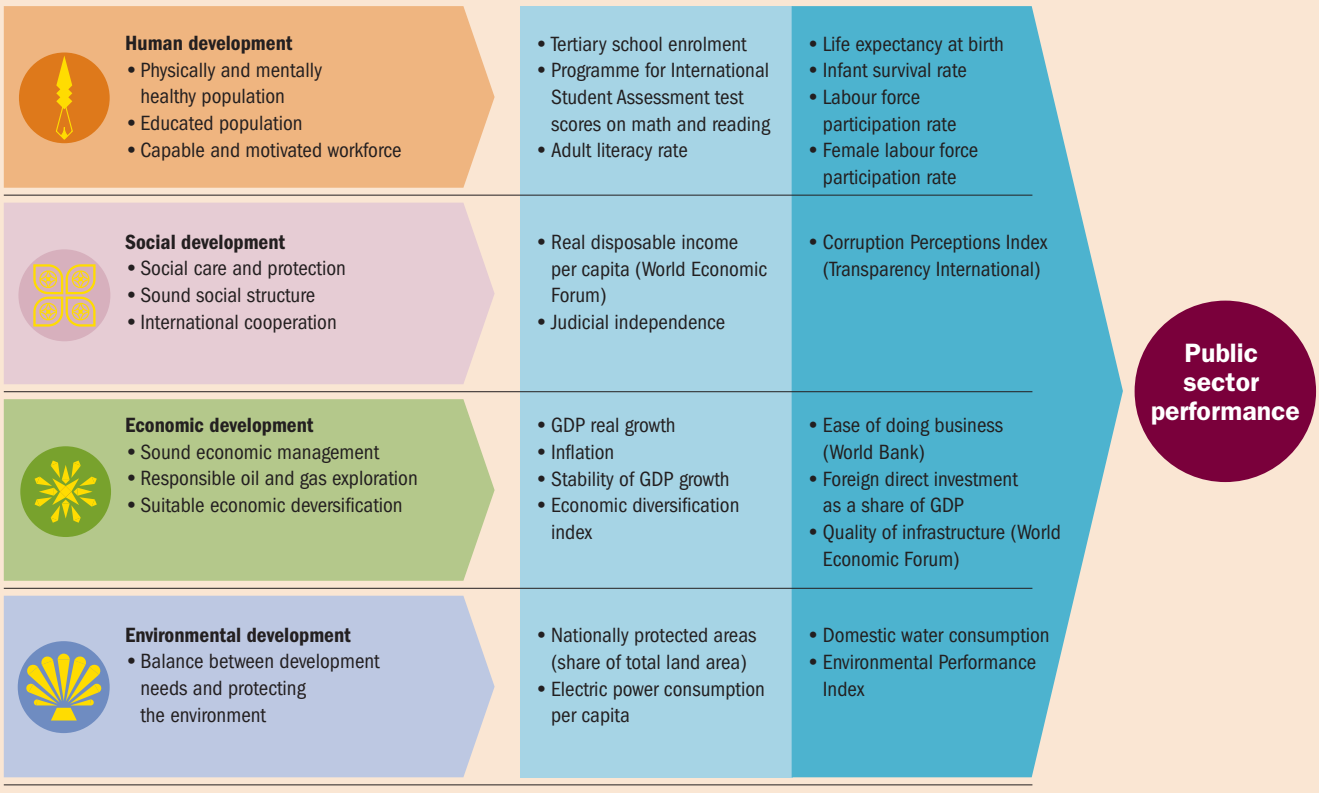


Figure 7.7 Overview of best practices journey to modernization

Levers	Current state	Laying the foundation for capabilities	Embedding institutional capabilities	Developing cross-institution excellence
				Maturity level
Policy and planning	• Short-term, one institution specific	• Centralized oversights with standard process	• Multiyear, performance and budget linked	• Coordinated, country-level long-term outcomes
Budget management	• Operational institution based, not linked to performance	• Programme based, enabling performance tracking	• Outcome-based flexible multiyear process	• National-level outcomes fully linked to strategic plans
Organizational alignment	• Functional silos with little accountability for outcomes	• Strong central coordination and process orientation	• Proactive cross-institutional collaboration	• Decentralize structure with productive lean organization
Human resources development	• Few set standards, lack of performance management	• Individual development programmes and increasing staff accountability	• Career paths tied to performance; line manager autonomy	• Strong motivation; merit-based career progression
Institutional processes	• Departmental-centric; manual	• Streamlined within entities	• Citizen-centric by entity; enhanced by information technology	• Customer need-based one-window processes
Procurement	• Manual process lacking transparency	• Automated and clearly defined; standardized	• Online procurement, including evaluation of goods and services	• Transparent strategic procurement including supplier integration
Information and communication technology	• Lack of common infrastructure and limited online service	• Data standards and increased online communication	• Central platform and data; online services	• Most services online with virtual platforms for citizens and customers
Performance management	• Lack of measurement and links to plans	• Defined key performance indicators linked to centrally monitored plans	• Standard format and common reporting standards	• Quarterly measurement of outcome-based goals linked to budgeting; public

Intermediate steps to modernization have been benchmarked, and short- and medium-term targets have been set. Building on this wealth of information, targeted projects have been developed, prioritized and sequenced over 2011–2016, for government as a whole and for individual institutions.

A three-phase building block approach to modernization has been developed (figure 7.8). The first, and longest, phase is laying the foundation for capabilities in fundamental areas at the whole-government level. This phase will emphasize enhancing collaboration. The second phase deals with embedding institutional capabilities; institutions will create a high degree of capability and capacity, but implementation must be flexible so that designs can be improved, as needed. The third phase focuses on developing cross-institutional excellence by creating a culture of collaboration in delivering services.

Programmes to develop and modernize public sector institutions

During much of the National Development Strategy 2011–2016 period, institutional development and modernization will be devoted to the foundation stage and to six focus areas, based broadly on the eight levers of public sector performance:

- Strategic policy and planning.
- Budget and financial management.
- Organizational alignment.
- Human resources development.
- Enabled institutional processes.
- Performance management.

While each focus area derives from different levers of public sector performance, all have outcomes that directly affect the seven drivers of public sector performance: efficiency, effectiveness, value creation, accountability, transparency, engagement and relevance (figure 7.9).

Figure 7.8 The three phases of institutional development and modernization: a long-term journey

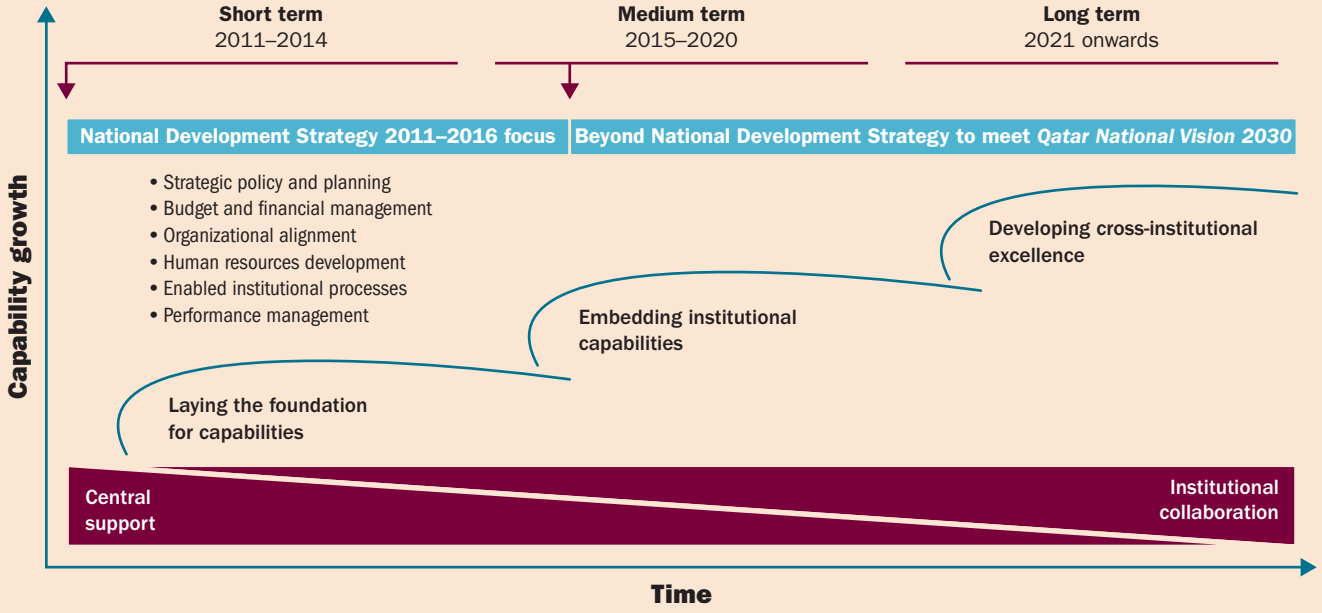
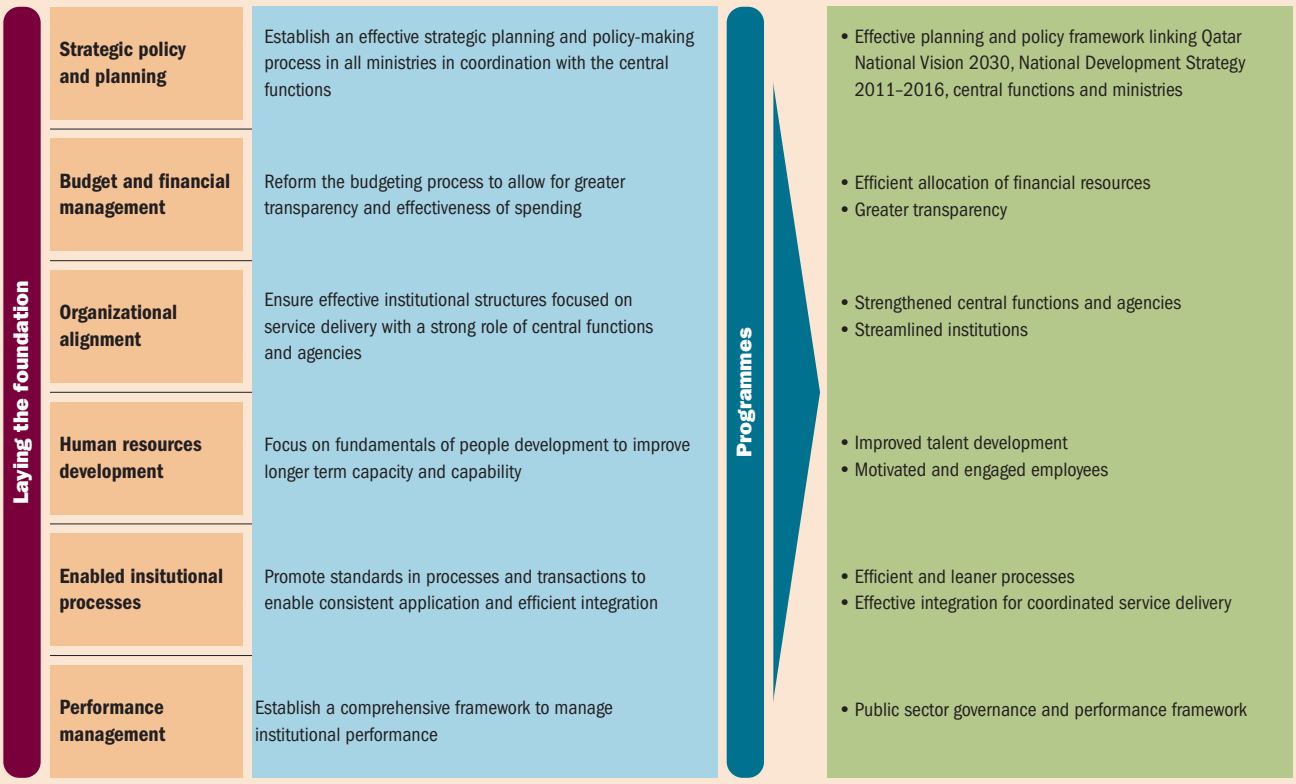


Figure 7.9 Focus areas with outcomes that will drive Qatar's public sector performance



Within these six focus areas, the 16 targeted projects on the whole-government level were designed to bring Qatar's public sector up to best practice level. These projects are part of the first foundation-laying step in the long-term modernization journey. Each project addresses a major gap. The suggested projects are not prescriptive but are designed to be flexible, with a high degree of stakeholder participation and ownership. Timing and implementation will depend on the capacity and readiness of each institution. The proposed projects allow setting clear targets and refining them as the projects are planned and implemented. The projects will be reviewed and adapted, as needed, in a collaborative process with the lead stakeholders.

Strategic policy and planning

Strategic planning is a new concept for Qatar's public sector, as most entities lack strategic planning capabilities. Entities that have plans have not linked them to *QNV 2030*. In the short term (by 2013), Qatar should focus on building a strong foundation for strategic planning, with all entities preparing well defined, standardized planning processes and annual strategic plans. The Cabinet's Central Policy and Planning Department can drive a top-down coordinated planning process. Customers and clients can also have a say in the short term, but on a limited basis with feedback gathered through surveys and other basic data collection methods.

Several requirements were identified for achieving the short-term goals, including building policy and planning capabilities in each entity, starting budget reform, building planning capabilities in the central functions, collaborating across entities and raising awareness of *QNV 2030* and the National Development Strategy 2011–2016.

By 2016, Qatar can achieve multiyear strategic planning that is linked to *QNV 2030*. Plans should also be linked to the national budget and to a performance management system that is closely linked to budget allocation. In the medium term (by 2016), all entities should participate in outlining the multiyear strategic planning for their sectors, and central collective planning should end. Customer and client voices should be heard regularly through channels such as surveys and focus groups.

Attaining the desired level of performance relative to plans will require a central public sector database to effectively monitor implementation of the National Development Strategy 2011–2016. Among the most important requirements to reach the goals at the medium term are multiyear, programme-based budgeting; a high level of institutional collaboration and coordination; the availability of planning experts; and an active performance management framework.

The overarching goal of the two projects in strategic policy and planning is to establish a strategic planning process and to support line ministries and agencies in developing their own strategic plans.

Formulate and implement a whole-government strategic and operational planning process

This project is designed to sharpen the focus of each ministry and align plans to key objectives, helping ministries evaluate trade-offs in resource allocation and focus employees on common goals and targets. The Cabinet's Central Policy and Planning Department will be the main stakeholder and responsible function of this project, setting up guidelines and coordinating and managing activities. The Ministry of Economy and Finance (MOEF), GSDP and the Cabinet's Central Organization and Development Department will provide coordination and management support during the 21-month implementation (9 months for design and 12 months for rollout). The project will develop an annual planning process with top-down and bottom-up validation and clear timelines. It will launch a pilot of the new strategic and operational planning process in selected ministries before rolling out full execution in all ministries.

Target

- Develop a clear annual planning process (including timelines) tied to *QNV 2030* and the National Development Strategy 2011–2016 budget and report strategic plans to the Cabinet's Central Policy and Planning Department.

Develop strategic planning capacity and capability within entities, and link them to the Cabinet's Central Policy and Planning Department

This project will enable ministries and agencies to develop their own strategic plans with minimal help from the Cabinet's Central Policy and Planning Department. That department will take the lead in building the capability and capacity of line ministries and agencies, the Cabinet's Central Policy and Planning Department and GSDP will help with coordination and management and the Institute of Administrative Development—with the help of other local and international training institutes—will develop training programmes. Approximately 27 months will be required to complete the project (9 months for design and 18 for rollout).

Target

- Install strategic planning process in ministries and agencies, with the staff and expertise necessary to develop strategic plans.

Budget and financial management

The budget reform project, to be implemented over several years, will modernize and develop national budget and financial management practices. The current budget, based on line-item accounting, will create bottlenecks during budget planning for institutional development and modernization and other National Development Strategy 2011–2016 projects. Global experience recommends that programme-based and multiyear budgeting processes be formulated in the context of the preparation of the annual budget. Multiyear budgets should be used to encourage the constructive involvement of ministries and agencies in the budget process and should evolve as a gradual practice. The value and the usefulness of the multiyear budget approach will depend on the reliability and accuracy of the medium-term budget estimates. The proposed reform will tie strategic plans to financial resources, maximizing revenue efficiency and effectiveness.

Qatar's budget is based on line-item accounting and consists of four categories: salaries and wages, operating expenditures, assets and major projects. Implementing the National Development Strategy 2011–2016 will require incorporating budgeting based on programmes, along with performance tracking, to increase transparency. With the aid of the MOEF, operational activities will be budgeted on an annual basis and projects on a multiyear basis. Key financial performance indicators will be defined, and performance will be measured against financial spending. The whole budget process—planning, execution and monitoring—will be automated.

Achieving these changes will require securing government commitment to budget reform, building financial capabilities within the MOEF, introducing financial management systems and tools, preparing a performance management framework and starting multiyear strategic planning.

In the medium term (2016), Qatar can base budgets on desired outcomes, not just on proposed projects and plans. The planning horizon should span more than one year, even for operational purposes. Entities should have greater autonomy to reallocate funds among line items during the annual budget cycle. And progress should be evaluated against defined key performance indicators when deciding on an entity's budget.

Reaching the 2016 targets will require qualified capabilities in all entities, multiyear strategic planning; stronger top and middle management and full application of financial management systems and tools.

Link expenditure management to strategic planning, increase transparency and automate budget processes

Reforming the budgeting process is a key project for institutional development and modernization. Reforming and automating the budgeting process will facilitate budget creation and resource allocation, strengthen the link between strategic planning and financial planning, increase the transparency of spending and help ministries evaluate trade-offs in allocating resources. The MOEF will lead the efforts to set up, manage, coordinate and implement the new budgeting process. GSDP, the Cabinet's Central Policy and Planning Department and the State Audit Bureau will provide support during the design phase.

During the design phase over the first year of the project, tasks will include shifting from annual to multiyear budgeting and from line-items to programme-based budgeting, linking budgetary planning to strategic planning, designing the automated budgeting system, building financial capabilities in line ministries and agencies and recruiting expertise to lead the new budgeting process. During the next two years, a fully operational and automated budgeting process (planning, execution, monitoring) will be implemented across all government entities. Achieving this outcome will require completing the strategic planning process by the end of the first year of budgeting reform.

Target

- Implement a fully operational and automated budgeting process across all government entities.

Organizational alignment

The projects in the organization alignment focus area will improve the efficiency and effectiveness of line ministries and agencies in at least three ways. First, they will more clearly define the role of the central functions and agencies. In countries that are just beginning to modernize, as Qatar is, central functions and agencies need to actively support line ministries and agencies in identifying and overcoming weaknesses and gaps and should develop standards guidelines for other entities to adapt and follow. Second, the government restructuring project, begun in 2008, will need to be revisited to align support and common functions and eliminate redundancies. Third, line ministries and agencies need to increase their effectiveness by trimming and optimizing spending on administrative functions and focusing more institutional resources on frontline and core services.

Qatar's 2008 government restructuring project is still under way. In its journey to modernization, Qatar should build on this effort. By 2013, Qatar should align administrative functions, start to build strong capabilities in central functions and agencies, establish distinct roles and responsibilities within and across entities and foster collaboration among the entities and between them and the central government functions. Entities should be held accountable for results and outputs in the short term. Dedicated strategic planning teams should be built within each ministry with experienced staff and strong links to the Cabinet's Central Policy and Planning Department.

The most important requirements for the short term are optimizing the size of each ministry and agency, strengthening central organization functions to promote collaboration, introducing citizen-centred service delivery and promoting a culture of teamwork and collaboration.

Qatar can further enhance its organizational design by 2016. Individual agencies should be granted greater autonomy to set their own targets and allocate resources, which should speed decision-making. Organization structures within each ministry should be reviewed to remove inefficiencies and duplication, to reduce overlaps with other ministries, to close gaps and to optimize the size of administrative functions. Collaboration across agencies and institutions should become more active.

Among the important requirements to reach these goals are installing a common information

technology platform to promote cross-entity collaboration, a central public sector database and robust performance management framework, and clearly defining roles and responsibilities.

Strengthen the role of central functions in managing government performance

This project focuses on strengthening the central functions and agencies so that they can support the early stages of institutional development and modernization and better manage overall government performance (by coordinating public sector governance, linking strategic planning to performance and sharing expertise with ministries and agencies). The central functions and agencies should demonstrate high levels of capability by displaying best practices in their own organizations.

The project will need approximately 27 months to complete. The first nine months will focus on defining and legislating central roles and responsibilities, the operating model and level of intervention of each central function and agency, collaboration mechanisms between central functions and agencies, and governance mechanisms for resolving conflicts. Global best practices will guide design of the role of central functions in Qatar. A centre of excellence and expertise will support the other central functions and agencies in developing the necessary knowledge and skills.

Target

- Establish a centre of excellence managed by central functions and agencies to provide technical training support.

Revisit the organizational structure and roles in all entities to align functions and remove redundancies

This project seeks to optimize the organizational structure of the government. It is intended to increase the efficiency and effectiveness of the public sector by promoting leaner institutions, aligning organizational designs and function, and improving accountability and transparency in decision-making. The Cabinet's Central Organization and Development Department will lead this effort, with the support of GSDP and the Cabinet's Central Policy and Planning Department and Central Human Resources Department. An estimated 16 months (4 for design and 12 for rollout) will be required to complete this project. Changes in organizational structure will be designed and implemented in all ministries and agencies, and then job families and job descriptions will be aligned with capabilities based on the new functions and structures.

Targets

- Establish the operational and regulatory responsibilities of each government entity across all ministries and agencies.
- Align job families and descriptions across all government line entities, based on the final structures, functions, standards and guidelines of all institutions.

Optimize administrative spending as a share of total costs, streamlining support functions

This project will increase the efficiency and effectiveness of administrative functions in ministries and agencies, focusing their efforts on frontline services and promoting customer-focused institutions. The MOEF will lead the effort to optimize administrative spending by defining country-wide standards, while the Cabinet's Central Organization and Development Department will help to align organizational structures with standards. The project is expected to last approximately 28 months (4 for design and 24 for rollout). Budget and human resources requirements for administrative functions will be benchmarked against global best practices to increase efficiency and reduce waste.

Targets

- Define standards and targets to optimize administrative spending and human resources in the medium and long terms.
- Establish systems for ensuring reductions in the administrative share of total cost for all

ministries and agencies that are tied to the budgeting system and overseen by the MOEF.

Human resources development

The quality of human resources in Qatar is vital to institutional modernization. The 2009 Law on Human Resources Administration was designed to attract highly qualified people to the public sector, but many opportunities remain to advance this goal.

In the short term, there are several areas for improvement. Job descriptions should be defined across the public sector. The Cabinet's Central Human Resources Department should develop guidelines to help entities plan the size and skill composition of the workforce. Staff development programmes should be designed based on individual career needs. Staff accountability should be increased to improve productivity, and a standard performance management framework for public sector employees should be designed and implemented by all entities. A country-wide talent sourcing strategy is needed to link ministry-level workforce planning and labour policy to ensure the availability of highly qualified staff across all sectors.

Reaching this stage will require implementing a standard human resources management system (including processes, common technology platforms and a central human resources database); recruiting and developing strong leaders in most entities, producing a training manual, developing or hiring well qualified human resources personnel and developing key human resources processes (such as workforce planning and career development).

The medium-term stage would then involve more sophisticated capabilities and developments. By 2016, entities should be empowered to manage their own human resources and multiyear workforce planning, while the central human resources function consolidates national workforce planning. A career path should be defined for each employee and tied to performance. Line managers should have greater autonomy in areas such as career development and training needs. Finally, an individual performance management system, based on competency standards, should be fully in place.

Reaching the medium-term goals will require complete commitment from top authorities to develop the public sector's human resources; amendment of policies and standards to strengthen implementation of the 2009 Law on Human Resources Administration to enable hiring and retention of experts and professionals (both Qataris and expatriates); highly qualified and experienced human resources staff in all entities; fully implemented and widely used human resources management system, and clear, well defined institutional goals and targets linking individual and institutional performance.

Enhance policies to attract talent under the 2009 Law on Human Resources Administration

This project will reduce the barriers to hiring high-potential individuals for the public sector and will be an important milestone for designing a national talent-sourcing strategy in line with the 2009 Law on Human Resources Administration. With the help of GSDP, the Cabinet's Central Human Resources Department will lead the effort, which will last about nine months (three months for design and six for rollout). By the end of the project, compensation structures and detailed guidelines and policies for performance-oriented hiring policies will be in place.

Targets

- Identify gaps between talent supply and demand, and develop the value proposition for attracting required talent.
- Define criteria for hiring local talent rather than expatriates and review compensation structures and policies for performance orientation.
- Establish policies in all ministries and agencies for implementing the 2009 Law on Human Resources Administration.

Develop a country-wide talent-sourcing strategy

This project will accelerate the build-up of capabilities required to modernize the public sector and support the transition to a knowledge economy. The Cabinet's Central Human Resources Department will lead the effort, while GSDP will help design the strategy. Design will take about 4 months, and rollout another 24 months. The project will identify the skills and capabilities required to fill talent gaps and establish partnerships with national and international universities and other organizations to facilitate access to the required talent. Interviewing and hiring will be coordinated with ministries and agencies with a view to identifying and hiring highly skilled public sector employees.

Target

- Identify and recruit skilled personnel for a modern public administration.

Implement a country-wide, comprehensive training strategy based on need assessments, linked to career development

The aim of this project is to build the required capabilities to modernize the public sector; increase its efficiency, effectiveness and value creation; and build a capable national workforce. The Institute of Administrative Development will lead the effort to develop a national training strategy, with the help of the Cabinet's Central Human Resources Department. The design will take approximately 6 months, and implementation another 24 months. The project will build the required expertise for country-wide training for public sector employees and establish long-term career development strategies for all job levels and families linked to that training.

Targets

- Provide training for public sector employees that matches Qatar's needs and employees' professional development goals.
- Transform the Institute of Administrative Development into a strong, demand-driven training centre, with the expertise to develop long-term career strategies for all job levels linked to training programmes.

Create human resources procedures and standards to develop skills and enhance the work environment

This project will strengthen motivation among public sector employees and improve the work environment. The Cabinet's Central Human Resources Department will lead the effort to create human resources procedures and standards, with the help of GSDP and the Cabinet's Central Organization and Development Department. The project, which is expected to last 27 months (9 for design and 18 for rollout), will result in mapped job levels and families across ministries and agencies. To advance implementation of the 2009 Law on Human Resources Administration, middle management will be empowered to introduce measures to boost employee motivation and discipline.

Targets

- Foster public sector employee motivation and discipline.
- Establish clear human resources standards and procedures, including for workforce planning, recruitment and hiring; career development; and a system for performance management.

Enabled institutional processes

A final important component, once all strategies have been defined, is the daily operation of government institutions. Current processes focus on procedures rather than on citizens and customers (the private sector, other public sector institutions and civil society). For example, customers must visit multiple locations to register a business. Other processes, such as public procurement, are outdated and not optimized. Collaboration and coordination across government entities is meagre. To strengthen institutional processes, Qatar should strive to match best practices in benchmark countries, with their citizen-centred focus.

In the short term, Qatar should focus on streamlining processes within each entity. A responsibility assignment matrix has to be developed for all processes. Traditional service delivery channels need to be expanded to cover delivery of services to customers by phone, regular mail or fax. Back-office processes, meanwhile, should be simplified and automated. Institutional processes within each entity need to foster interagency collaboration and coordination. Key requirements for this near-term stage include stable organization structures for each entity, advanced information technology capabilities (including platforms, staff and structured databases) and up-to-date websites.

For 2016, Qatar will have more ambitious targets for citizen-centred service delivery processes in each entity. Information technology use should be enhanced to integrate processes and provide online service delivery, at least for some offerings. To make one-window service delivery a reality, collaboration among entities within each sector must be high and activities harmonized. Important requirements include stronger central organization and information and communication technology functions; common information technology platforms, a central public sector database and fully automated processes within and across entities.

Provide one-window services to customers for frequent requests

This project will simplify access to public services (such as through single-user identification for online service offerings). The Cabinet's Central Organization and Development Department will lead the effort, with the help of GSDP during the design phase and ictQATAR during implementation. Approximately 33 months will be required to fully implement the project (9 for design and 24 for rollout). Major outcomes include streamlined and automated processes for delivering services, mechanisms in place to facilitate collaboration and coordination among entities delivering shared services, and a service delivery website established for each entity that will merge into a government-wide service delivery website by the final stage of the project. All government services will be readily accessible online.

Target

- Enable all citizens and customers to access all public services online, using a single-user identification.

Deliver integrated services to businesses across the full lifecycle from setup to exit

This project aims to simplify how businesses access services (through one point of contact) throughout their lifecycles. The Ministry of Business and Trade will lead design and implementation, with the help of the Qatar Chamber of Commerce and Industry in design and implementation and ictQATAR in implementation. The project will last an estimated 33 months (9 for design and 24 for rollout). This project will develop a central business database of all businesses in Qatar. It will streamline and optimize service delivery, with a mechanism to facilitate collaboration in delivering shared services. And finally, businesses will be able to access all government services through one website with one common company identification.

Target

- Simplify and improve business access to public services online through a one-stop shop.

Enhance procurement policies to establish standards for tendering, contracting and managing supplier performance

This project will increase transparency in public procurement, maximize value for money, preserve public funds and improve the quality of goods and services. The MOEF and the central tendering committee will lead the effort to design and set up guidelines for public procurement in approximately 9 months (3 for design and 6 for implementation), with ictQATAR's help in implementation. The major outcomes will be clear and detailed processes (including standard templates) for public tendering and contracting, an efficient supplier performance management

system and an e-procurement system to integrate suppliers. The new processes will enable the Central Tendering Committee of the MOEF to monitor procurement (awards, pricing and progress updates).

Target

- Install an efficient and modern electronic procurement system.

Implement standards for information transactions and knowledge management

This project will improve the efficiency of internal processes and public service delivery and help decision-makers perform their duties. With the help of Qatar Statistical Authority, ictQATAR will lead a 24-month effort to design (6 months) and implement (18 months) standards for each transaction. Major outcomes will include central electronic data repositories (such as citizen/customer databases, business and healthcare registries), clear roles and responsibilities in managing knowledge and data, and systems and tools allowing easy access to the central data repositories. Standard templates will be created to facilitate report preparation for decision-makers.

Target

- Establish a modern electronic system for data and knowledge management.

Establish a standard information technology platform to facilitate integration of ministry services

This project will facilitate the one-stop shop, promote active collaboration and coordination among government entities and improve government efficiency. The 24-month design (6 months) and rollout (18 months) of the standard government information technology platform will be led by ictQATAR, with other ministries and agencies providing design support. Outputs include completion of the government information technology blueprint architecture, based on global best practices and recent technology trends. External technology experts will validate the design and implementation. The project will culminate in the creation of central databases and repositories.

Target

- Launch an integrated electronic services platform.

Performance management

To achieve the goals of the National Development Strategy 2011–2016, Qatar needs a robust performance management framework to monitor and evaluate implementation across all sectors, to allocate financial resources appropriately and link them to strategic plans and institutional performance. The current government structure does not accommodate these activities at the whole-government level.

A well defined performance management framework enables measuring, managing and assessing outcomes against targets. It creates options for central functions to address underperformance. It adds robustness in integrating measures of performance across entities. It provides early-warning indicators to support scenario analysis and corrective actions to avoid problems. Finally, it can drive behavioural changes by promoting accountability for achieving targets and making performance transparent.

Creating a performance management framework with a robust design requires:

- Establishing a detailed annual performance management process and a full performance management cycle that sets targets, identifies key performance indicators, creates reports for measuring and assessing those indicators, takes corrective actions and rewards great performance.
- Developing key performance indicators to measure target achievement.
- Creating well defined roles with clear accountabilities.
- Designing a data-gathering and data-reporting process that ensures the integrity and timely availability of high-quality data.
- Integrating key performance indicators and present them in standardized reports.

- Tracking facts and manage a closed feedback loop for corrective actions.

Implementing a comprehensive performance management system will be challenging. It must be a flexible process, adapted to Qatar's needs and adjusted according to the lessons of experience. A good way to start is to focus on the most important and strategic indicators.

Establish a public sector performance management framework with defined interventions to resolve performance gaps

This project is critical for developing and modernizing public sector institutions. The aim is to tie financial and human resources to strategic plans, track progress and outcomes, identify performance gaps to trigger corrective actions and create a robust framework for achieving development goals. The Cabinet's Central Policy and Planning Department will lead the effort to establish a performance management framework, with the help of other central functions and agencies (GSDP, Qatar Statistical Authority, State Audit and the MOEF). The project is expected to require 33 months to complete (9 months to design and pilot the performance management framework, and 24 to fully roll it out). This project will link institutional performance to strategic plans and budgeting, define clear targets and key performance indicators at each level (centre, sector and ministry/agency), detail standards and timelines for measurement and reporting, establish processes for corrective actions, and design and implement information technology tools to facilitate performance management.

Targets

- Establish a performance management system for the public sector, including government agencies.
- Link institutional performance to strategic plans and budgets.

Project priorities and fostering cross-sectoral links

To avoid bottlenecks and smooth implementation, the 16 projects have been prioritized, detailed and sequenced, and the requirements and risks have been identified. The projects were prioritized by impact and implementation complexity. Impact was calculated as the average of each project's urgency and importance and of value creation to institutions (in development and modernization), citizens and customers, and the country as a whole. Implementation complexity was based on input requirements (resources), capability requirements, institutional barriers and time to impact. Projects were plotted on a matrix of impact and implementation complexity. This tentative prioritization will help determine the sequence of implementation.

Project priorities

Three projects—strengthening the role of the central functions, enhancing policies to attract talent and developing a public sector performance management framework—will start as soon as possible because of their critical impact on the National Development Strategy 2011–2016. The remaining top-priority projects are set to start in 2011. Reforming the budget process, developing strategic and operational planning and building strategic planning capability and capacity are set to start in 2011 because of their impact on other projects starting in that timeframe. Enhancing procurement policies should also start in 2011 to improve procurement across the public sector.

Priority 2 projects are set to start in 2012. Implementing standards for information and knowledge management is set to start in 2012 because of the importance to other projects starting that year. The remaining projects (priority 3) are set to start in 2013. Implementation will be monitored closely by the lead stakeholders, who should intercede as needed to ensure that project benefits are captured. Some institutions may need to adjust their project structure to fit their needs and work style.

Central functions are crucial to implementing the National Development Strategy 2011–2016 and to advancing the broader institutional development

and modernization effort. A high-level framework for the future state incorporates three roles: ensuring coordination and collaboration among ministries, providing objective advice and defining strategies and programmes to address critical challenges for the country that cannot be addressed by a single ministry.

Fulfilling these roles requires understanding the options. The most pertinent criterion is the capability level in individual ministries. As a starting point, two options can be considered. One is to begin with a centralized model and, as capability grows, move gradually to a decentralized model. A second is to start with a supportive centre that provides flexible support to ministries. This support must be clearly defined and communicated so that ministries and agencies can take advantage of the relationship.

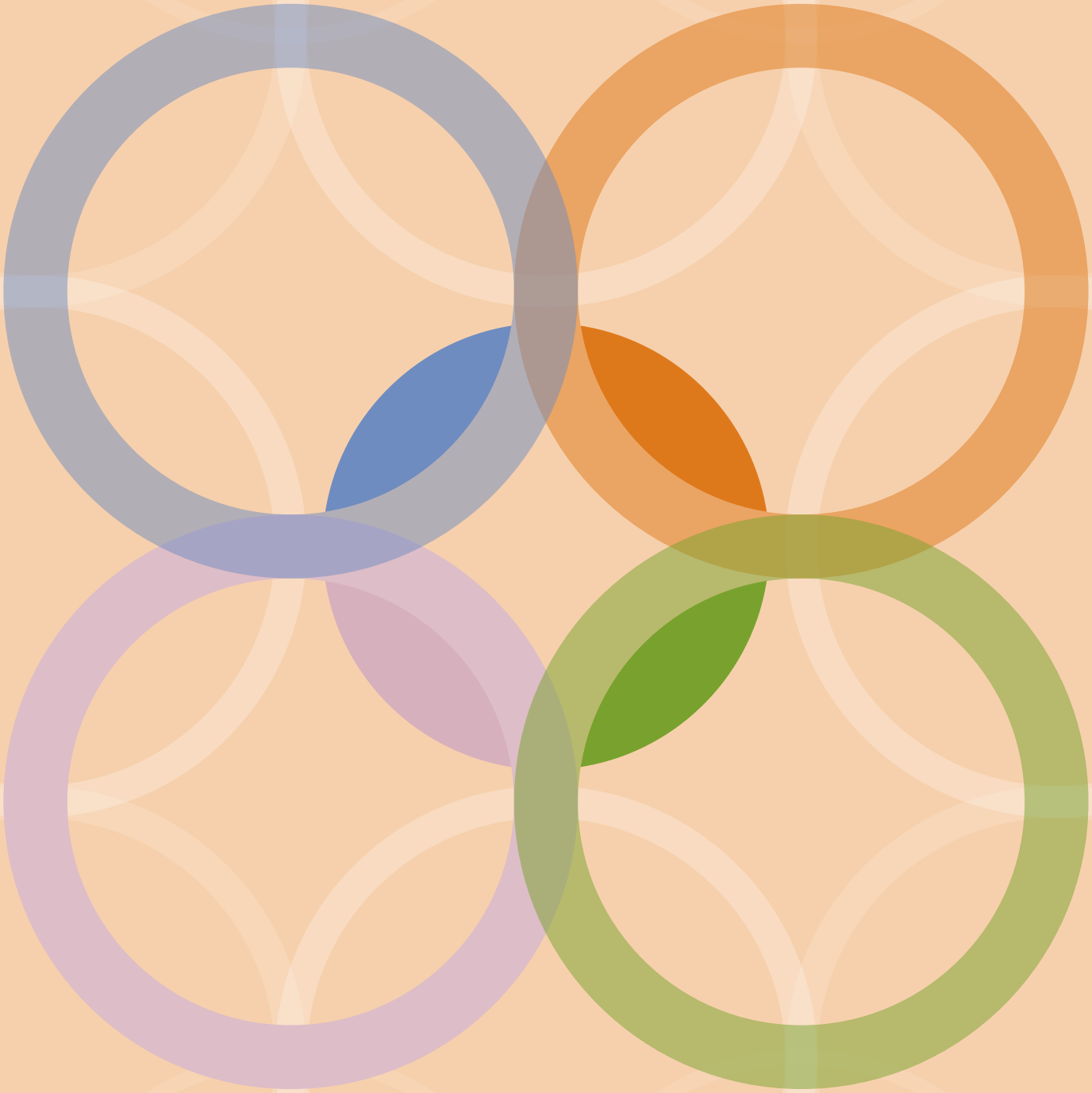
Fostering cross-sectoral links

Institutional development and modernization is a critical enabler for driving change, achieving the National Development Strategy 2011–2016 outcomes and targets in all sectors and realizing the goals of *QNV 2030* (figure 7.10). The national institutional development and modernization programme will promote an outcome-based approach to strategic planning as an effective means of managing resources and advancing transparency and accountability. It will foster a culture based on performance and cultivate the development of public service delivery–oriented mind-sets. Capacity building programmes conducted by the Institute of Administrative Development will be realigned to give individuals the skills needed to achieve the outcomes and targets.

Figure 7.10 Institutional development and modernization as an enabler of all sectors

Chapter 8

Moving from strategy to implementation



8 Moving from strategy to implementation

Qatar's National Development Strategy 2011–2016 is comprehensive and multidimensional. Each part entails different challenges, so careful implementation will be vital to its success. The machinery of implementation is already in motion, but the pace needs to be accelerated and achievement strengthened. Success will depend foremost on demand by the country's leadership for regular information on progress and results. It will also depend on mainstreaming the strategy across the whole government.

Ministries and agencies will need to take ownership of the National Development Strategy 2011–2016, develop their own operational plans and accept accountability for delivery. At the centre, the Strategy will have to influence processes that drive decisions on how resources are used and provide operational tools for assessing individual projects and policy proposals in an integrated way. Major challenges lie ahead, particularly in building the human and institutional capabilities for effective planning and project execution, but also in providing the legal basis for some proposed innovations.

Embracing an expanded orientation and new ways of working

The expanded orientation embedded in the National Development Strategy 2011–2016 calls for integrated decision-making. Decisions on economic direction and speed must be balanced with considerations of human development, social development and environmental development. Sustainability dictates that current claims on resources be weighed against the ability of future generations to meet their needs. Policy-making and investment within the framework of the National Development Strategy 2011–2016 will require integrated assessments of national projects and close collaboration across traditional sector boundaries.

The implied shift in programme planning and management is sweeping. Rather than build programmes around inputs or processes, budgets will be determined by the specific and often measurable results identified in the operational plans of ministries and agencies. These in turn will be crafted to support Strategy goals and targets.

Qatar's political leaders will drive the changes foreshadowed in the Strategy. They will demand information on progress. Individual ministries and government agencies will be accountable for implementing the elements of the Strategy that fall within their mandates. This accountability will need to be matched by commensurate delegated authority and empowerment across and within agencies. Increasingly, implementing agencies must take a sectorwide view of their activities and coordinate with other actors on strategy, planning, budget and operations. Coordinating mechanisms at the centre of government, including new budget processes, will support this new orientation.

Strategic thrusts

Preparation of the National Development Strategy 2011–2016 has been inclusive and participatory, spanning ministries and agencies across government, the private sector and civil society. It has

drawn on a wide body of knowledge and experience, and emerging strategic thrusts have been closely guided by *Qatar National Vision 2030 (QNV 2030)*. The Strategy endeavours to leverage and integrate existing development initiatives, fill gaps and align planning and activities. Background sector reports prepared by Task Teams propose numerous interventions to support specific goals. Table 8.1 aggregates these interventions around 20 key challenges and the responses suggested by the National Development Strategy 2011–2016. These strategic thrusts provide a platform for identifying and designing targeted programmes and projects for implementing the Strategy.

The building blocks of implementation

Moving from identifying strategic thrusts to implementing interventions requires careful planning by implementing agencies and support from the central functions of government. The concepts and targets identified in the National Development Strategy 2011–2016 and in the sector background reports will need to be transformed into detailed project blueprints focused on achievable results that reflect the strategic directions in table 8.1. To the extent possible, there should be a focus on "quick wins" (box 8.1).

These blueprints must include logical assessments anchored in sound diagnostics; proven approaches and learning; measurable outputs, outcomes and impacts for measuring and evaluating progress; clear accountabilities and built-in mitigation measures tailored to identifiable risks. The financial and human resources needed to manage and implement each project and sustain its benefits must also be in place. And project risks and successes will be critically influenced by stakeholder awareness, understanding and ownership.

But projects should not be judged in isolation. To ensure effective integration and sequencing and proper resource allocation to priorities to achieve "value for money", the National Development Strategy 2011–2016 calls for a portfolio view of projects by implementing agencies and nationally. Among implementing agencies this portfolio perspective will emerge in strategic and operational plans that are part of a broader sector focus (see chapter 7). To mitigate risks at an institutional level, the capabilities of government central functions will be strengthened so that they can deliver advice and support to implementing agencies. At the national level funding priorities will be articulated through reformed budget processes and a programmatic approach to public investment planning (see chapter 3). Strengthened management, monitoring (process and results) and evaluation systems—informed by appropriate indicators at the project, institution, sector and national level—will support strategy implementation and integration (see below).

New planning and business processes and systems will take root at a pace that acknowledges current limitations on capabilities and experience (see below). In addition, because all challenges cannot be tackled simultaneously, projects with maximum impact and feasibility need to be identified and prioritized (figure 8.1). Interdependencies must also be kept firmly in mind when planning project phasing.

Box 8.1 The value of quick wins

Certain projects promise significant impact without creating complex implementation challenges. For example, lifting the compensation ceilings in the 2009 Law on Human Resources Administration and budgeting for active recruitment of qualified professionals could yield visible results fairly quickly.

Perceptible progress in one sector can motivate teams working for results in other sectors and convince the public of the government's commitment to the National Development Strategy 2011–2016 and its capacity to deliver. In the early stages of reform, outstanding performance can be held up as an example.

Capturing success stories is not only motivating and helpful in building momentum behind the larger change effort. Reporting on successful outcomes can also inform subsequent analyses and identify best practices in programme management.

Table 8.1 Qatar's 20 key challenges

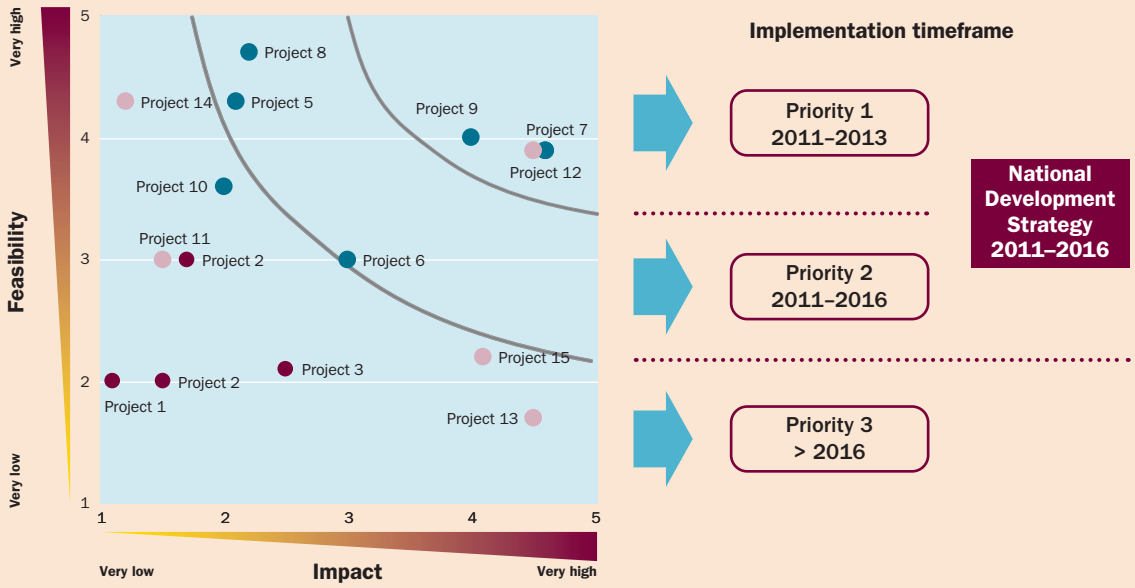
Qatar National Vision 2030 pillar	Major challenges	Strategic responses
Promoting sustainable prosperity	Ensuring sustainability in a setting where hydrocarbon resource depletion is still the dominant source of income	Establishing a hydrocarbon depletion policy; sustaining high rates of saving and making sound investments in human, capital and financial assets for the future
	Promoting stability in an environment where hydrocarbon price volatility creates risk and presents challenges for calibration of economic policy	Reforming budgetary and fiscal processes, public investment programming, liquidity management and domestic capital market development
	Enhancing efficiency in the use of all resources to support high standards of living for current and future generations	Promoting competition, trade and investment; improving regulation; strengthening demand management for water, power and fuel; reforming agriculture
	Diversifying the economy to create durable wealth and support wider societal viability	Bolstering enterprise creation and private sector development; improving the business climate, strengthening regional integration; reforming the labour market
Promoting human development	Rebalancing the healthcare system to reduce the emphasis on hospital-based care and increase integration between levels of care	Establishing an integrated healthcare system to shift the balance of care towards a patient-focused, preventive and community-based model
	Meeting critical needs for a high-quality workforce across the health sector (and affecting other sectors)	Developing and implementing a national workforce plan that takes a multifaceted approach and optimizes the skills mix
	Raising the achievement of Qatari students at all levels, especially in math, science and English and, through that, increasing educational attainment	Strengthening reforms in K–12 and higher education to ease demand and supply constraints
	Coordinating education and training providers and aligning with labour force needs	Addressing quality, efficiency, inclusiveness and portability across the entire education and training systems
	Aligning labour market composition of Qataris with the objectives of a diversified knowledge economy	Realigning demand and supply in the Qatari workforce, with an emphasis on continuously upgrading skills
	Reducing reliance on low-cost, low-skilled foreign labour	Reviewing the sponsorship law and identifying ways of attracting and retaining higher skilled expatriate workers
Taking an integrated approach to sound social development	Balancing the forces of modernization and globalization with the support of traditional Qatari family values and patterns of family formation	Implementing cross-cutting measures to strengthen family ties, values and relationships
	Strengthening social inclusiveness	Launching a multistakeholder programme that strengthens an inclusive social protection system
	Improving road safety and ending the growing epidemic of traffic accidents, particularly among youth	Introducing a holistic approach to road safety, with cross-sectoral partnerships
	Preserving traditional Qatari culture and Arab identity	Using culture as a platform to safeguard and develop Qatar's national heritage
	Encouraging a more active lifestyle for young people, to reduce the health-related risks of inactivity	Promoting local sports participation and development as part of a comprehensive, active lifestyle programme
Sustaining the environment for future generations	Reforming unsustainable water consumption patterns	Establishing an integrated water management plan across the value chain
	Encouraging sustainable urbanization and consumption patterns that reduce environmental stresses	Promoting more sustainable urbanization and a healthier living environment
Developing modern public sector institutions	Strengthening weak institutional capacities	Strengthening the role of central functions to support institutional development and modernization
	Expanding human resources capacities across the public sector	Applying policies to attract talent, including staff development programmes
	Establishing a centralized system for managing for results and for linking resource allocation to strategic plans	Launching a public sector performance management framework linking institutional performance to strategic plans and budgets

Figure 8.1 Assessing the impacts and feasibility of programmes and projects

Criteria and weight for setting priorities for programmes and projects

Impact			Feasibility		
Criteria	**Description**	**Weight**	**Criteria**	**Description**	**Weight**
Importance	• Need for change exists • Critical area versus secondary or tertiary focus • Role in National Development Strategy 2011–2016	30%	Budget	• Financial support and resources required to execute initiative	30%
Speed of impact	• Time taken for changes to take effect • Quick fix or long term	30%	Skill set needed	• Required skill set and capabilities • Presence of skills and capabilities	30%
Urgency	• Action required now versus ability to delay action • Size of problem and need to resolve	40%	Complexity	• Difficulty in executing initiative (stakeholders, legal changes, cultural shift, time for changes)	40%

Illustrative prioritization framework for sequencing programmes and projects into implementation waves



To implement the National Development Strategy 2011–2016, ministries and agencies will need competent project management functions. Where these do not exist, establishing them must be a priority. Where they do exist, they may need strengthening. While staff redeployments might address some gaps, qualified and experienced people are vital for effective project management functions. Over what is likely to be an extended transitional period, some agencies may have to "buy-in" such services under arrangements that transfer knowledge and build national capabilities. However, human resources constraints will need to be addressed across a much broader front. Inadequate attention to project management functions will jeopardize project quality and could lead to project failures.

The human resources constraint

The National Development Strategy 2011–2016 calls for individuals or teams within government to work in ways that may be new to them. In many cases Qatar lacks sufficient capacity to implement policies and programmes successfully.

Human resources shortages in key sectors could undercut the delivery of major outcomes. For example, the Strategy calls for a large expansion of primary and preventive healthcare. But Qatar has only 1.9 primary care physicians for every 10,000 people, far below the World Health Organization recommended level of 5.6. Expanding primary care coverage will require recruiting qualified expatriate health professionals and training Qataris. This picture of acute skill gaps is repeated across the public sector. Experienced regulators, scientists, engineers, economists, statisticians, health specialists, social policy experts, financial analysts, project specialists and other experts are all in short supply. Increasingly, qualified and capable Qataris are being lured to attractive positions in the private sector.

Recognizing the ubiquitous constraints on human capabilities and the threats to successful implementation of the National Development Strategy 2011–2016, the Cabinet's Central Human Resources Department will lead in crafting a central recruitment plan. Ministries responsible for managing programmes will, as a priority, conduct skills assessments identifying gaps. Partnerships with universities, the private sector and others will be explored for bridging capacity shortfalls.

Easing human resources constraints may require modifying the 2009 Law on Human Resources Administration so that it does not inhibit efforts to retain Qatar's best talent in the public sector. Given the small number of citizens, the increasing demands on government and the complexity of Qatar's economy and society, strategic and flexible international recruitment of high-level experts and specialists warrants consideration.

The imperative of building local capabilities in the public sector (see chapter 4) and in the private sector (see chapter 3) has already been expressed. But the point merits underlining. A concerted capacity-building effort across all sectors of government will be spearheaded by the Institute of Administrative Development, supported by the Cabinet's Central Human Resources Department. The Institute will build and operate a world-class training centre to help agencies develop the capabilities needed to realize their strategic goals and to assist Qataris in developing their career potential.

Budgetary resources for the strategy

National Development Strategy 2011–2016 projects and programmes will need to be supported by fiscal resources. But much more than budgets is involved. As explained in chapter 3, the Strategy foreshadows a new integrated approach to the allocation and use of the state's resources. A new fiscal architecture will promote alignment of spending with leadership directions and priorities set out in the Strategy. This new architecture will be supported by a modern and technically sound legal framework for public sector financial management and by other innovations, including a public investment programme. These will reinforce the link between the National Development Strategy 2011–2016 and economic management of the country.

In the immediate future—fiscal year 2011—resources will be made available to support National Development Strategy 2011–2016 priorities. Budget resources may be used to fund recruitment of new personnel where there are skill gaps or to procure professional services for technical and advisory purposes. Limited resources may also be made available to support capital expenditures. The Ministry of Economy and Finance's Budget Call circular sets the policy and provides technical and fiscal parameters to guide budget preparation. To release resources to support priorities, it will be important that implementing agencies identify potential savings in other areas.

The Ministry of Economy and Finance, the General Secretariat of the Council of Ministers and the General Secretariat of Development Planning will provide targeted support to aid implementing agencies in adjusting to new arrangements.

The fiscal 2011 budget will be prepared under the budget law of 1975, with chapter classification of spending. However, a functional classification of expenditure (based on the United Nations classification of government functions and sectors) will be piloted. A functional classification is needed to support sectorwide approaches to budget preparation and to pave the way for programmatic budgeting that focuses on results. In fiscal 2011 a sector wide approach may be piloted in health and education, with agencies working collaboratively to prepare budgets that serve common (programme) goals. The Ministry of Economy and Finance would consider agency budgets together with agencies as a group rather than bilaterally.

Beyond fiscal 2011, momentum will build towards programmatic budgeting, anchored in a new functional classification of expenditures and based on strategic and operational plans developed and owned by ministries and agencies. To support budget modernization, new templates and technical guidelines will be produced for preparing projects and budgets and relevant training will be provided. By fiscal 2013 or 2014 it is anticipated that significant capital projects will be considered within a public investment programming framework that supports broader portfolio assessment. By that time, too, fiscal planning parameters would be firmly anchored in a forward looking macrofiscal framework.

Bridging the information and knowledge gap

Successful implementation will require closing information gaps. Much new information was unearthed in preparing the National Development Strategy 2011–2016. A strategic, systematic and sustainable approach to collecting and disseminating statistical information is needed. Qatar Statistics Authority is mindful of these needs and is working hard to meet them.

There are data gaps in virtually all sectors. The authority to collect information and to establish how was conveyed in legislation approved early in 2011. Indicators need to be developed that measure Qatar's progress in achieving the goals of the National Development Strategy 2011–2016 at a sector and national level and that reflect the priority accorded sustainable and integrated development. Citizens, civil society, the private sector and others will need access to better information so that they can contribute more effectively to Qatar's development efforts. The government requires better data and information to direct policy, guide project design, allocate resources efficiently and monitor and report on progress in processes and results. These issues are closely connected to the monitoring and evaluation of Strategy implementation and results (see below).

Implementation through participation, communication and advocacy

In general, effective consultation and participation of stakeholders or target groups in project design and implementation can raise awareness, create trust, foster ownership, improve project design and increase the chances of beneficial results.

But strong participatory processes may not always be sufficient. Some goals of the National Development Strategy 2011–2016 will be achieved only if the government convinces other actors to alter their attitudes or behaviours. Support for some elements of the Strategy will demand consistently implemented and clearly communicated advocacy campaigns conducted by people with specialized knowledge of communications for behaviour change, social marketing and opinion research tools.

Consider, for example, the goal of improving child well-being and welfare. Simple regulatory shifts will not be enough to alter patterns of poor physical fitness and low university enrolment of men.

Agencies involved in child welfare will need to understand why certain patterns have emerged before effective advocacy campaigns can be designed to change them. In other, often sensitive, areas, a better understanding of the prevailing situation is needed to support informed and effective advocacy.

Monitoring and evaluation

The final step in successful implementation is monitoring and evaluation.

At a project level, continuous ministry and agency tracking of milestones using built-in systems for monitoring process (outputs) and results can strengthen accountability for delivering agreed outcomes and can provide critical information on performance. Active monitoring of project performance enables implementing agencies to identify obstacles and tackle them before they derail projects or jeopardize outcomes.

Some monitoring and evaluation structures are already in place. For example, the environmental management strategy is supported by a system built on process and impact indicators. Process indicators are determined by activities with a timeframe for implementation, defined responsibilities for carrying them out and indicative costs for each of them. Impact indicators are determined by baselines and targets for each key output.

For all projects, the implementing agency will establish measurable indicators, create or refine information-gathering systems to collect related data and record and analyse the information.

Realistic timelines that take limitations and constraints into account are crucial. They can enable managers to know when milestones have been missed and signal possible bottlenecks in the regulatory structure, deficiencies in skill levels or budget shortfalls.

All projects under the National Development Strategy 2011–2016 will be evaluated at completion to reinforce a culture of accountability for delivering results. In addition, evaluations can provide critical learning about successes and shortcomings from which follow-up programmes can benefit.

At a sector level, systems for aggregating information and distilling lessons with broader applicability will be important. In due course, sector spending reviews could be considered, as might sustainable development audits. Where to house these new functions within government would have to be decided.

At a national level, evaluation is an important source of knowledge about what has worked or not worked, and why. It also can show how social, human, economic and environmental dimensions of the National Development Strategy 2011–2016 interact.

A mid-term assessment of the National Development Strategy 2011–2016 at a project, sector and national level in the second half of 2013 will inform future refinements of strategic directions.